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VOL. 81 NO. 6

June, 1942

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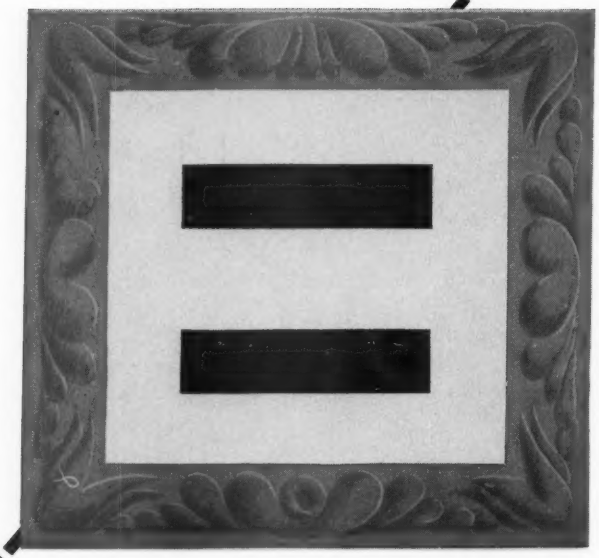
OFFICIAL JOURNAL OF THE ILLINOIS STATE MEDICAL SOCIETY



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The Illinois Medical Journal

June, 1942

VOL. 81, NO. 6

Official Journal of the Illinois State Medical Society

EDITOR — Harold M. Camp. EDITORIAL BOARD — James H. Hutton, Chairman, Frederick H. Falls, Josiah J. Moore, Edwin M. Miller, Chauncey C. Maher, Harry S. Gradle, Philip H. Kreuscher, Harry Culver.

Editorials

URGENT NEED FOR PHYSICIANS IN OUR ARMED FORCES

General Hershey, Director of the Selective Service System, has announced recently a new plan for procuring physicians for the armed forces. This new plan will most likely relieve much of the congestion in Washington and supply the needed men with a minimum of delay. A meeting was held in Washington on April 24th which was attended by the Corps Area Chairmen of Procurement and Assignment, the State Chairmen east of the Mississippi River, with representatives of the office of the Surgeon General of the Army and of the Adjutant General's office also present. On May 8th a similar meeting was held in Omaha attended by a similar group from all western states. At this meeting the plan approved by General Hershey in collaboration with other official groups was outlined in detail.

In each state members of these several groups will work jointly in the recruiting of physicians. It was stated that there is an urgent need of some 6,000 additional physicians before July 1st, and preferably 10,000 if they can be procured. All physicians within the present draft age are urged to submit an application for service to the State Chairman of Procurement and Assignment, who in turn will forward same to the recruiting officers for the state who will ask for immediate clearance of the applicants.

Commissions of first lieutenant and captain may be issued immediately following physical examination and approval of the candidates. General Hershey in his bulletin which has been submitted to all State Selective Service officials and to the local Boards, calls attention to the fact that physicians who have been classified III-A on account of dependents may be reclassified at I-A for they will all receive commissions and the pay should be adequate to care for families during the term of service.

It seems quite probable that before the end of the present year a total of 15,000 or more physicians will be required for our constantly growing army. All county committees on Procurement and Assignment should already have submitted to the office of the state Chairman a list of all physicians within the county giving the name, address, school of graduation, and other pertinent data which is transferred to cards in the Chairman's office with their notation as to "availability" or "essentiality" for easy reference.

All hospitals, sanitariums and clinical groups have also been requested to submit a list of their respective staff personnel giving similar data and statements relative to availability. Warning has been issued that younger men are eligible to call by Selective Service, and in every instance where possible, these younger physicians should be replaced by older men capable of doing similar work for the duration. Likewise all medical schools have been asked to submit

a list of all staff members and have been urged to see that their lists are "stream-lined" to make as many young physicians as possible available for military service.

The need is urgent and the physicians of Illinois will respond promptly and see that the required number of doctors are made available for all government needs. It has been stated that physicians who can qualify and who are not citizens of the United States may be accepted for enlistment in the Army and after three months service, may be made citizens and given commissions in the Medical Corps.

All Selective Service Boards have received this order from General Hershey, and are cooperating with the Procurement and Assignment Service and with the joint recruiting teams within the states in the general desire to procure immediately the number of physicians actually needed.

Additional information on this subject will be found in this issue of the Illinois Medical Journal in the department devoted to "Medicine and National Defense."

REPORT ON 1942 ANNUAL MEETING

The 1942 Annual Meeting of the Illinois State Medical Society was held in Springfield according to schedule, May 19, 20, 21. The meeting was well planned and well attended when proper consideration is given to the fact that many hundreds of members of this society are now in military service, and that many were not permitted to attend on account of increased work through the diminished number of physicians in the area, and with the present tire rationing program which prevented many driving to the meeting.

There were slightly more than 1300 registered during the three day session. More consideration was given this year to discussions of subjects of military nature, and the Wednesday morning joint program was devoted entirely to this subject. A number of prominent physicians were scheduled, including Dr. Frank H. Lahey of Boston, President of the American Medical Association, and Chairman of the Procurement and Assignment Service for Phys-

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Edward H. Weld, M.D.

President, Illinois State Medical Society
1942-1943

icians, Dentists and Veterinarians, and one of America's master surgeons.

In accordance with the custom of recent years, the Orations in Medicine and Surgery were delivered on Tuesday evening, May 19th. The Oration in Medicine was delivered by Cecil J. Watson, Professor of Internal Medicine, University of Minnesota Medical School, and his subject was "Macrocytic Anemia." Frank H. Lahey, Boston, delivered the Oration in Surgery, on the subject, "Surgical Management of Lesions of the Esophagus, Stomach, Rectum and Colon." The attendance for this Tuesday evening session was perhaps the largest that ever attended any program at annual meetings. Both Dr. Watson and Dr. Lahey participated in the Wednesday morning Joint Session, "Medicine and the War" which also was well attended.

The regular scientific meetings of the seven individual sections were well attended and greatly enjoyed by all those present. The technical exhibits were displayed in the Knights of Columbus Building, and most of those present at the meeting spent all available time showing their interest and appreciation in the efforts of the manufacturers of supplies and accessories used by the medical profession, for the fine work which has been done by them in recent years.

The Scientific exhibits were displayed in the nearby Elks Club, the large auditorium being used for this purpose. It was well filled with the many exhibits arranged under the supervision of J. P. Simonds as Director of Exhibits, and Frank J. Jirka as Chairman. The Committee on Awards had some difficulty in its efforts to judge properly those exhibits entitled to the several medals and certificates of merit.

Awards for exhibits

1st prize — Frederick H. Falls and Miss Charlotte Holt

Silver Medal — "Abortion"

2nd prize — James McCuskey and William Morginson

Bronze Medal — "Treatment of Epitheliomas with Combination of X-Ray and Destructive Procedures; Reports of Results with 600 Lesions."

3rd prize — Leo L. Hardt, L. H. Sloan and M. Weissman

Bronze Medal — "Gastroscopic Findings in Pulmonary Tuberculosis"

Certificates of Merit:

A. A. Mertz — "An Improved Method of Fixation of Fractures of the Neck of the Femur."

John D. Ellis and L. M. Marsh, "Sketetal Traction through Metacarpals."

British Library of Information, State of Illinois, Illinois Department of Public Health, "Health and War."

Other Meeting Highlights

The House of Delegates held the usual two meetings, the first on Tuesday afternoon, May 19th, and the second on Thursday morning, May 21. Much business was referred to the House for proper action, and the complete transactions will be published in the July Illinois Medical Journal.

Frank H. Lahey, President of the American Medical Association and Chairman of Procurement and Assignment Service for Physicians, Dentists and Veterinarians, addressed the House on Tuesday afternoon, telling of the urgent need for physicians in our Armed Forces at this time. A minimum of 6,000 is needed before July 1st. He told of the new procedure which has been adopted to avoid unnecessary delay in the approval of applications and the issuing of commissions through cooperation with the State Chairman of Procurement and Assignment, the County Committees and the newly created Recruiting Boards established in each state.

The usual elections were held on Thursday morning with the following results:

President-Elect — George W. Post, Chicago

First Vice-President — Hermon H. Cole, Springfield

Second Vice-President — Charles O. Lane, West Frankfort

Secretary-Treasurer — Harold M. Camp, Monmouth

L. E. Day, Chicago, Andy Hall, Mt. Vernon, and G. C. Otrich, Belleville, were elected Councilors of their respective districts for another term of three years, and Walter Stevenson, Quincy, was elected as Councilor for the Sixth District to replace T. B. Knox who desired to retire from the Council at this time.

Charles H. Phifer, J. J. Pflock, G. Henry

Mundt and R. K. Packard all of Chicago were re-elected as delegates to the A. M. A. for two years, and E. S. Hamilton, Kankakee, was re-elected as delegate for a similar period.

At the end of the second meeting of the House of Delegates, Edward H. Weld, Rockford, was inducted into the office of President by Charles H. Phifer, the retiring President. The House unanimously gave the retiring President a most hearty vote of thanks for his fine work during the past year.

A complete list of committees and other pertinent information will appear in the July Illinois Medical Journal.

The House of Delegates voted to hold the 1943 annual meeting in Chicago subject to the subsequent approval of the Council.

ILLINOIS PHYSICIANS IN SERVICE

At the present time, the record file in the office of the Secretary of the Illinois State Medical Society, shows the following men on active duty in some branch of our armed forces. We are all well aware that the following list is not complete, and that corrections, additions and deletions should be made. For that reason we are publishing this information in the Journal, and are asking that the medical profession of Illlinois, especially the officers of component county societies, cooperate with the Secretary in making this list an accurate record of the physicians now in service, and on active duty.

NAME & HOME ADDRESS	COUNTY
Abrams, Morris, Chicago	C. M. S.
Abt, Arthur F., Chicago	C. M. S.
Adler, Samuel, Oregon	Ogle
Ahroon, C. R., Bloomington	McLean
Allen, Harvey S., Chicago	C. M. S.
Allen, John B., Chicago	C. M. S.
Allen, Robert A., Chicago	C. M. S.
Altman, H. P., Marengo	McHenry
Ash, Alfred S.	Adams
Ashby, John S., Chicago	C. M. S.
Ashley, Richard, Chicago	C. M. S.
Athey, George L., Quincy	Adams
Baer, Walter H., Peoria	Peoria
Bailis, J. M., Pittsfield	Pike
Baker, Alonzo N., Marion	Williamson
Baker, Lyle L., Alton	Madison
Ball, O. H., Bloomington	McLean
Ball, Wilbur G., Bloomington	McLean
Ballin, Michael, Chicago	C. M. S.
Ballou, J. W., Rushville	Schuyler
Barker, M. Herbert, Chicago	C. M. S.
Bass, Howard H., Chicago	C. M. S.
Battaglia, Samuel, Chicago Heights	C. M. S.
Bay, Anthony, Chicago	C. M. S.
Beaton, Lindsey, Chicago	C. M. S.
Becker, Harry G.	Lake
Beinar, Peter J., Chicago	C. M. S.
Belmonte, John V., Chicago	C. M. S.
Berg, George, Chicago	C. M. S.
Bielinski, Brunon, Manteno	Kankakee
Blatchford, Frank W., Chicago	C. M. S.
Blocksom, B. H., Rockford	Winnebago
Bloom, Charles R., Chicago	C. M. S.
Boice, William A., Chicago	C. M. S.
Boland, J. D., Sterling	Whiteside
Bomze, Edward J., Chicago	C. M. S.
Boshes, Benjamin, Chicago	C. M. S.
Bowers, D. E., Peoria	Peoria
Bowman, Harold, S., Jacksonville	Morgan
Boyd, O. B., East St. Louis	St. Clair
Boylston, George A., Chicago	C. M. S.
Boynton, M. W., Chicago	C. M. S.
Boyer, Richard C., Chicago	C. M. S.
Braceland, Francis J., Chicago	C. M. S.
Bradburn, George, Chicago	C. M. S.
Branch, Charles D., Peoria	Peoria
Braze, Alexander, Rockford	Winnebago
Breck, Merrick R., Chicago	C. M. S.
Brenner, Frank, Jr., Quincy	Adams
Brodsky, Abraham, Manteno	Kankakee
Brooks, L. C., Freeport	Stephenson
Brosin, Henry Walter, Chicago	C. M. S.

Brown, David, Manteno	Kankakee
Brown, Jack, Decatur	Macon
Bullock, N. C., Rockford	Winnebago
Bunchman, L. P., Clinton	DeWitt
Burack, Samuel, Kankakee	Kankakee
Burke, Jerome J., Chicago	C. M. S.
Burket, Walter C., Chicago	C. M. S.
Burley, R. D., Mt. Sterling	Cass
Burns, Edward M., Freeport	Stephenson
Butkus, Walter, Chicago Heights	C. M. S.
Cada, Edward G., Chicago	C. M. S.
Camp, Edward H., Chicago	C. M. S.
Campbell, Paul A., Chicago	C. M. S.
Capps, Richard B., Chicago	C. M. S.
Carlin, George W., Wilmington	Will-Grundy
Cherner, A. M., Chicago	C. M. S.
Choisser, John Elder, Harrisburg	Saline
Christenson, A. W., Rockford	Winnebago
Citron, Robert R., Peoria	Peoria
Cohen, Bernard, Chicago	C. M. S.
Cohen, Theodore, Chicago	C. M. S.
Cohler, B. C., Chicago	C. M. S.
Cohn, Arnold M., Pana	Christian
Cohn, Isadore, Chicago	C. M. S.
Cohrs, Clarence C., Chicago	C. M. S.
Collins, Harold J., LaHarpe	Hancock
Collins, R. Bruce, Rock Island	Rock Islan
Comer, Fay S., Cairo	Alexander
Comess, Oscar, Chicago	C. M. S.
Conley, Thomas J., Evanston	C. M. S.
Cooper, Leo Kenneth, Chicago	C. M. S.
Conner, James A., Chicago	C. M. S.
Corbus, Budd C., Jr., Chicago	C. M. S.
Costin, Max, Chicago	C. M. S.
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Dolan, P. T., Pittsfield	Pike
Dolph, I. E., Manito	Mason
Doud, Ernest A., Chicago	C. M. S.
Douglas, Thomas C., Chicago	C. M. S.
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Mailer, Andrew R., Galesburg Knox
Maller, Adolph, Chicago C. M. S.
Mammoser, Lambert F., Chicago C. M. S.
Markiewicz, Simon, Chicago C. M. S.
Markson, David E., Chicago C. M. S.
Marquardt, Theodore R., Elmhurst C. M. S.
Martin, F. R., Decatur Macon
Martin, John, Chicago C. M. S.
Mason, Michael L., Chicago C. M. S.
Matson, Kenneth L., Chicago C. M. S.
Mauzey, Armand J., Chicago C. M. S.
Mayer, Leo L., Chicago C. M. S.
Mazet, Robert, Jr., Springfield Sangamon
Mead, Newton C., Chicago C. M. S.
Meltzer, H. L., Clinton DeWitt
Mercer, Ray, Quincy Adams
Mergener, John Charles, Chicago C. M. S.
Messman, L. E., Onarga Iroquois
Mielcarek, Leonard, Chicago C. M. S.
Miller, Herbert P., Rock Island Rock Islan
Milles, George, Chicago C. M. S.
Mills, Morton J., Chicago C. M. S.
Moffatt, J. S., Byron Ogle
Mohart, John H., Chicago C. M. S.
Monroe, Clarence W., Chicago C. M. S.
Monroe, Stanley E., Evanston C. M. S.
Moore, Bert, Canville Vermilion
Moore, G. E. Morgan
Moore, Lawrence Franklin
Moore, Rollin S., Streator LaSalle
Morrey, Robert C., Chicago C. M. S.
Mullen, Timothy, Seneca LaSalle
Murfin, Maurice, Decatur Macon
Murphy, T. J., Decatur Macon
Murray, D. E., Chicago C. M. S.

Nagel, Frank E., Chicago	C. M. S.
Nelson, Tell, Chicago	C. M. S.
Nesselrod, J. P., Evanston	C. M. S.
Nesseman, A. C., Waukegan	C. M. S.
Newell, Robert H., Chicago	C. M. S.
Nieder, Samuel, Gilman	C. M. S.
Nixon-Davis, W. J., Jr., Chicago	C. M. S.
Norbury, Frank Garm, Jacksonville	C. M. S.
Norris, Harold V., Jacksonville	Wayne
Olmsted, Randolph F., Chicago	C. M. S.
Olson, C. P., Rockford	C. M. S.
O'Neil, Hugh B., Chicago	C. M. S.
Olwin, John, Chicago	DeWitt
Orcutt, Wm. H., Chicago	Rock Island
Palmer, W. H., Rockford	Champaign
Parker, F. C., Danville	McHenry
Parker, Harry J., Chicago	Lake
Pearson, E. F., Springfield	C. M. S.
Pickett, William J., Chicago	C. M. S.
Pollack, S., Chicago	C. M. S.
Pollock, Fred, Chicago	C. M. S.
Post, John, Chicago	C. M. S.
Potter, Charles Chandler, Alton	C. M. S.
Prempos, Thomas G., Chicago	C. M. S.
Price, Harold, Chicago	C. M. S.
Pritikin, Roland I., Chicago	Lake
Puntenney, Irving, Chicago	C. M. S.
Przygocki, S. F., Chicago	Iroquois
Queen, Frank B., Chicago	C. M. S.
Quin, Jeremiah, Chicago	Morgan
Raber, Paul A., Chicago	Morgan
Raider, Jack H., Chicago	C. M. S.
Rainey, C. W., Chicago	Winnebago
Rand, George L., Chicago	C. M. S.
Ransom, G. T., Fairfield	C. M. S.
Ransom, Stephen W., Jr., Chicago	C. M. S.
Rest, David, Chicago	Winnebago
Restarski, Alvin F., Chicago	Vermilion
Rhea, Keith, Clinton	C. M. S.
Richman, S. H., Rock Island	Sangamon
Ricketts, F. J., Sadorus	C. M. S.
Ricketts, J. A., Woodstock	C. M. S.
Robbins, R. H., Waukegan	C. M. S.
Roberts, Ralph C., Chicago	C. M. S.
Robinson, Harry M., Chicago	Madison
Rocco, Paul C., Chicago	C. M. S.
Romano, John E., Chicago	C. M. S.
Romanski, Arthur F., Chicago	C. M. S.
Rosanova, Albert R., Chicago	C. M. S.
Rose, Fred E., Jr., Millstadt	St. Clair
Rosenblum, Alfred H., Chicago	C. M. S.
Rosengard, J. L., Chicago	C. M. S.
Rosenthal, Irving H., Chicago	C. M. S.
Rosenthal, Martin J., LaSalle	LaSalle
Ross, Donald, Chicago	C. M. S.
Ross, Perry W., Chicago	C. M. S.
Rubenstein, H. I., Chicago	C. M. S.
Rubin, Simon S., Chicago	C. M. S.
Rubovitz, Frank E., Jr., Chicago	C. M. S.
Russell, A. S., Urbana	Champaign
Rutledge, J. H., Nebo	Peoria
Ryan, H. E., Centralia	Marion
Sala, R. O., Rock Island	Rock Island
Salzman, J. M., Springfield	Sangamon
Sarkissian, S. D., Chicago	C. M. S.
Sarma, P. J., Chicago	C. M. S.
Saunders, H. Prather, Chicago	C. M. S.
Sawyer, Preston, Fairmount	Vermilion
Saxon, M. R., Aurora	Kane
Schiff, Jos. M., Chicago	C. M. S.
Schoolman, Joseph G., Chicago	C. M. S.
Schowengerdt, W. H., Champaign	Champaign
Schultz, Abraham, Chicago	C. M. S.
Schwartz, Louis, Manteno	Kankakee
Scott, W. E.,	McLean
Sears, K. M., Aurora	Kane
Seed, Lindon, Chicago	C. M. S.
Segenreich, Harry, Manteno	Kankakee
Seifert, E. H., Galesburg	Knox
Serota, Herman, Chicago	C. M. S.
Sexton, G. A.	Piatt
Shagam, Robert M., Chicago	C. M. S.
Shallenberger, P. L., Chicago	C. M. S.
Shapiro, Fred, Chicago	C. M. S.
Shapiro, Louis, Manteno	Kankakee
Sheehe, N. L., Rockford	Winnebago
Shinglemen, Willard E., Chicago	C. M. S.
Siegel, Irving, Chicago	C. M. S.
Simon, S. Wm., Chicago	C. M. S.
Sinaiko, Russell P., Chicago	C. M. S.
Singer, John D., Chicago	C. M. S.
Sintzel, A. R., Belleville	St. Clair
Smith, C. R., Villa Grove	Douglas
Smith, Durand, Chicago	C. M. S.
Smith, Edward C., Chicago	C. M. S.
Smith, William W., Waukegan	Lake
Solomon, Samuel J., Chicago	C. M. S.
Sondag, R. F., E. St. Louis	St. Clair
Sours, James W., Peoria	Peoria

Spector, Israel H., Chicago	C. M. S.
Spellberg, Mitchell A., Chicago	C. M. S.
Spinka, Isadore, Manteno	Kankakee
Stein, Albert F., Chicago	C. M. S.
Stein, Emil J., Chicago	C. M. S.
Stein, Justin J., Elmhurst	C. M. S.
Steinert, Theodore, Chicago	C. M. S.
Steinhoff, Carl F., Chicago	C. M. S.
Sternberg, Thos. H., Peoria	Peoria
Stettauer, J. Lewis, Chicago	C. M. S.
Stoll, John E., Chicago	C. M. S.
Stotz, Kenneth F., Chicago	C. M. S.
Stubblefield, H. I., Macomb	McDonough
Stuteville, Orion H., Chicago	C. M. S.
Sugar, Hyman Saul, Chicago	C. M. S.
Summers, Thomas F., Olney	Richland
Sutton, Charles F., Chillicothe	Peoria
Sweeney, Leo P. A., Chicago	C. M. S.
Talbot, Charles G., Chicago	C. M. S.
Teasley, B. C., Jr., Robinson	Crawford
Telford, E. W.,	DeKalb
Tevorek, Foy F., Chicago	C. M. S.
Thomas, Morris, Chicago	C. M. S.
Thornburg, W. M., DuQuoin	Perry
Thrift, Chester N., Chicago	C. M. S.
Thurston, E. W., Chicago	C. M. S.
Tindall, F. G., Rockford	Winnebago
Tinsley, Milton, Chicago	C. M. S.
Tobin, Walter W., Chicago	C. M. S.
Trapp, Robert N., Lincoln	Logan
Tresley, Ira J., Chicago	C. M. S.
Trotter, J. D., Carthage	Hancock
Tulsky, Alex S., Chicago	C. M. S.
Turnbull, George C., Chicago	C. M. S.
Turow, Irving L., Bartonville	Peoria
Urist, Maurice, Manteno	Kankakee
Vacante, Anthony, Chicago	C. M. S.
Vermeren, John Cyrille, Chicago	C. M. S.
Vesceu, Leslie L., Chicago	C. M. S.
Vorisek, E. A., Chicago	C. M. S.
Wade, Chester, Chicago	C. M. S.
Wagner, Arnold, Chicago	C. M. S.
Wagner, David H., Chicago	C. M. S.
Wald, Sidney Irving, DuQuoin	Perry
Walker, William D., Ashley	Washington
Waller, James B., Decatur	Macon
Walsh, Eugene L., Chicago	C. M. S.
Walsh, Thomas G., Chicago	C. M. S.
Ward, Edward J., Peoria	Peoria
Washington, John C., Chicago	C. M. S.
Waud, Sidney, Chicago	C. M. S.
Wedral, Jerry W., Chicago	C. M. S.
Weinberg, Charles, Chicago	C. M. S.
Weiner, Harry I., Chicago	C. M. S.
Westenberger, L. H., Chicago	C. M. S.
Wien, Norman, Chicago	C. M. S.
Williamson, H., Danville	Vermilion
Willis, David A., Chicago	C. M. S.
Wilson, Clyde S., Belleville	St. Clair
Wiltrakis, Geo. A., Alton	Madison
Wittenberg, C. E., Danvers	McLean
Wojcik, S. J.,	Lee
Wolff, Luther F., Chicago	C. M. S.
Wolin, Irving, Chicago	C. M. S.
Wolters, Simon L., Chicago	C. M. S.
Wrist, Maurice, Kankakee	Kankakee
Yellen, Harry J., Chicago	C. M. S.
Young, L. W., Fairfield	Wayne
Young, Richard Hale, Chicago	C. M. S.
Young, Samuel, Chicago	C. M. S.
Zarcone, V. P., Decatur	Macon
Zelik, Wm. B., Lincoln	Logan
Ziegler, D. F., Chicago	C. M. S.
Zimmerman, L. E., Harvard	McHenry
Zolt, Nathan, Chicago	C. M. S.

CHOLAGOGUE AND CHOLERETIC EFFECTS OF BILE ACIDS AS COMPARED WITH OLEIC ACID

(E. W. Lipschultz & I. A. Feder, Brooklyn, in *Amer. Jl. Dig. Dis.*, May)

The cholagogue effect on the gallbladder of ten normals of 0.5 grams of (a) bile acid, and (b) oleic acid by mouth in a gelatine capsule, followed by water, was observed on different days by duodenal drainage and cholecystography.

The choleretic effect of these two drugs was studied on the same ten subjects on different days by means of transduodenal drainage.

Cholecystographic studies made on the same ten subjects one and two hours after ingestion of (a) 0.5 grams of bile acids and (b) 5 c.c. of oleic acid, on different days closely corroborated the results obtained with duodenal drainage.

Two of the ten subjects showed gallbladder emptying when bile acids were used. When oleic acid was used, nine of the ten subjects showed gallbladder emptying, manifesting itself in partial or total disappearance of the gallbladder shadow.

Our observations indicate the oleic acid possesses choleretic properties.

Correspondence

FIFTY YEAR CLUB LUNCHEON REPORT

The Fifty Year Club, Illinois State Medical Society, met at the Abraham Lincoln Hotel, Springfield, Illinois at a noon luncheon, May 20, 1942. Dr. Andy Hall, Chairman of the Fifty Year Club, presided. After introductory remarks by Dr. Hall, Dr. Carl Black of Jacksonville, Illinois was introduced and gave a very interesting address. Following Dr. Black, Dr. W. A. Evans of Aberdeen, Mississippi was introduced and delivered a most interesting address. Dr. Thomas J. Hilliard, of Fairfield, Illinois, another Fifty Year member, gave a very interesting account of one of the early physicians, his diagnosis and treatment of certain ailments. Dr. James Hutton, ex-president of the Illinois State Medical Society and Dr. John Nagel, Councilor of the State Medical Society were visitors and addressed the group.

Dr. Carl Black, who has been deeply interested in this organization, and whose hobby for many years, has been the collection of photographs of early physicians, displayed photographs of more than 100 Fifty Year men. Dr. Black stated that he has at the present time photographs of more than 4000 physicians — the largest collection known in the United States. He stated that he would like for his collection to be turned over to the Ilinois Historical Society where they could be securely preserved at Springfield.

It was the concensus of opinion that this banquet should be an annual affair, held at the time and place of the Illinois State Medical meeting.

Besides a number of visitors, the following Fifty Year Men were present:

Dr. Ralph Wheeler, 446 Oakdale Ave., Chicago, Ill.
Dr. H. S. Bossart, Buckley, Ill.
Dr. Cornelius Mackey, 7359 Vernon Ave., Chicago, Ill.
Dr. Monroe Etherton, Carbondale, Ill.
Dr. T. J. Hilliard, Fairfield, Ill.
Dr. F. L. Wakefield, Hayworth, Ill.
Dr. A. L. Adams, Jacksonville, Ill.
Dr. Albert Lyles, Virginia, Ill.
Dr. Julian W. Zinn, Kramer, Indiana
Dr. Edward D. Howland, 843 W. Belden Ave., Chicago, Ill.
Dr. W. W. Williams, Quincy, Ill.
Dr. A. P. Hedges, 5840 Kenmore Ave., Chicago, Ill.
Dr. H. L. Kampen, Monmouth, Ill.
Dr. Carl E. Black, Jacksonville, Ill.
Dr. B. E. Twitchell, Belleville, Ill.
Dr. W. A. Evans, Aberdeen, Mississippi
Dr. E. B. Montgomery, Quincy, Ill.
Dr. Clifford U. Collins, Peoria, Ill.
Dr. F. M. Anderson, Decatur, Ill.
Dr. James A. Day, Springfield, Ill.
Dr. Perry H. Stoops, Ipava, Ill.
Dr. Silas McClelland, Decatur, Ill.
Dr. W. T. McLean, Maroa, Ill.
Dr. George E. Southwick, Chatham, Ill.
Dr. U. G. Darling, 619 Addison St., Chicago Ill.
Dr. H. O. Munson, Rushville, Ill.
Dr. J. C. Roberts, Peoria, Ill.
Dr. A. A. Knapp, Peoria, Ill.
Dr. George A. Dicus, Streator, Ill.
Dr. C. W. Cargill, Mason City, Ill.

Dr. J. W. Bitter, Quincy, Ill.
Dr. J. P. Roark, Bushnell, Ill.
Andy Hall, M.D., Chairman
Fifty Year Club

MEDICAL OFFICERS FROM ILLINOIS PROMOTED

Promotion of three Army Medical Corps Officers, on active duty at Sixth Corps Area headquarters in Chicago, was announced by Major General George Grunert, Commanding General of the Corps Area. All are residents of Chicago. They are:

Captain James W. Hall, Jr., to Major. Major Hall, who resides at 8114 Euclid Avenue entered active duty February 14, 1941.

1st Lieutenant Laurence S. Jennings to Captain. Captain Jennings, a resident of 1440 East 52nd Street, was ordered to duty September 8, 1941.

1st Lieutenant James H. De Weerd to Captain. A resident of 6104 South Woodlawn Avenue and a native of Grand Rapids, Michigan, Captain De Weerd has been on duty since November 19, 1941.

AMERICAN UROLOGICAL ASSOCIATION

The Western Branch of the American Urological Association will hold its annual convention this year at Hotel Del Monte, California, from June 22 to June 24.

WARNING ON 'ATHLETE'S FOOT' TREATMENT

Until the conclusion of studies to determine the extent of the causticity of a mixture of phenol and camphor, recently hailed as "A Working Cure for Athlete's Foot," and its possible benefits and dangers, "treatment of 'athlete's foot,' ringworm and other fungous infections (with this mixture) or any other potent remedies is best intrusted to the qualified physician," *The Journal of the American Medical Association* warns in its May 9 issue. It has been warned that the mixture should not be applied to a wet skin since water has been reported to make it caustic.

Pointing out that most cases of fungous infection require persistent skilful attenion if the disease is to be brought under complete control, *The Journal* says that "Recommendation that untrained people use on themselves an agent which has the potential danger of causticity is highly doubtful."

REPORT FIRST AMERICAN CASE OF CYST IN FINGER JOINT

The first American case and the sixth in medical literature of an epithelial (outer skin and mucous membrane covering) cyst enclosed in the bony part of an end joint of a finger is reported in *The Journal of the American Medical Association* by Samuel C. Yachnin, M.D., Passaic, N. J., and Frederick Summerill, M.D., Middletown, N. Y.

They say there are two possible explanations of its origin, either congenital malformation with misplacement of the epithelial cells during the embryo stage of life, or an injury which implants the cells in the bony structure.

In each of the 6 cases reported there was a history of a crushing or penetrating injury which damaged the nail bed. C. Friedländer, the proponent of the first theory, claims that the misplaced cells are stimulated to growth by injury. However, Drs. Yachnin and Summerill state that "it is difficult to accept the view of congenital origin, for trauma (injury) was a constant finding. . . . We feel, therefore, that these tumors are caused by the implantation of epithelial cells into the bone as a result of the injury. This could take place through the smallest kind of a fracture or even by transmission along the vascular channels. . . . The rate of growth of the tumor appears to be quite slow. In 4 cases the injury was sustained from thirteen to fourteen years before the appearance of symptoms, while in Friedländer's case the interval was one year and in our case two years. . . . No recurrence has been reported following treatment by amuptation."

SELECTION OF BLOOD BANK DONORS

Only those persons who have been born in this country and who have never lived in districts where malaria is prevalent should be used as donors for blood banks, Ernest F. Gordon, M.D., Yonkers, N. Y., advises in *The Journal of the American Medical Association*. He says that such a policy will minimize the possibility of spreading the disease from man to man. The first recorded case of an accidental transmission of malaria through transfused stored blood is reported by him.

Medical Economics

Edited by R. K. Packard, M.D., Chairman of the Committee on Medical Economics of the Illinois State Medical Society, 826 East 61st Street, Chicago, Illinois.

This column has not commented during the year on the proposed plans that have been discussed in the Journal and were contained in the Committees report relative to medical care for the recipients of old age assistance and assistance to dependent children.

While we have recognized, that this is an economic problem of the physicians who render this care we have felt that the Committee appointed to study this problem and work out the plan were eminently fitted for the task. They have devoted a great deal of time to this study as evidenced by their work. Inasmuch as the House of Delegates did not approve the report or the report of the Reference Committee comment at this time can be made.

The Social Security Act, as amended, provides for assistance to the old age and dependent children with no specific plan for their medical care. The old age group is constantly increasing as evidenced by the fact, that during the last twenty years, those reaching the age of sixty have increased from two to eight per cent so that approximately 10,000,000 people in the United States are past sixty years of age. Probably ninety-five per cent of these people are either totally or partially indigent. The assistance granted was largely to provide either food, clothing and shelter or all three. The proportion of these people that lost their savings for old age during the last depression cannot be determined, and undoubtedly a percentage of them fall into this group. However, previous observations have estimated that ninety-five per cent of the people reaching the age of sixty are either totally or partially indigent. In the past these people were either cared for by their children, relatives or state or county poor farms. The Social Security Act attempts to relieve the latter, and obviously has created a condition where relatives are reluctant to make contributions as they did in the past.

As the length of life increases the number receiving assistance will necessarily increase and we ponder over the possibility as to whether many people will cease in their determination to provide for themselves in their old age, and rely on increasing Federal help. With the dependent children the situation is somewhat different because the money expended is in an effort to help them so that eventually they will be able to provide for themselves and not be a burden on the state.

Allowances for assistance for food, clothing and shelter can be somewhat definitely established while the allowances for medical care cannot be established due to the fact that there will be a wide variation in the incidence of disease among this group.

It is evident from the plan proposed that there will be a large amount of clerical work necessary for that portion relating to medical care, and it may be possible that the expenses for clerical work and investigators will equal the amount paid for medical care. The forms as proposed for the doctors to fill out take condsiderable time, on their part, and likewise must consume considerable time at the other end of the investigation and final disposition. The fees established seem reasonable and the question of mileage is undoubtedly debatable. The important thing is that some program be adopted that

will render efficient medical care to this group, and undoubtedly the medical profession will have to contribute to this program, as they have always contributed to it in the past even before the Social Security Act made any provision.

The resolution introduced before the House of Delegates, asking the American Medical Association to appoint a liaison committee to collaborate with the Social Security Board to the end that this program may be worked equitable for all the states in the union, should receive careful consideration.

In the meantime it would seem for the best interest of the medical society and the recipients of this assistance that the present program, as worked out by the Committee and the Department of Public Health, should be adhered to until such time as a better program can be established.

It would seem unwise to appoint an entire new Committee which would necessarily have to go over much of the study and the work before they could acquaint themselves with the many problems that exists in this program. The present Committee and Council have given much thought and study to this program and the profession at large has reason to have confidence in their final disposition of the matter.

R. K. Packard, M. D.
Chairman
Committee on Medical Economics.

VITAMIN FILMS IN COLOR

Eli Lilly and Company, Indianapolis, announces the release of three 16-mm. silent motion pictures in color descriptive of vitamin deficiency diseases. The films are available to physicians for showing before medical societies and hospital staffs. One deals with thiamine chloride deficiency, one with nicotinic acid deficiency, and the third with ariboflavinosis. The major part of all films concerns the clinical picture presented by the patient with reference to treatment by diet and specific medication. They do not contain advertising of any description, nor is the name of Eli Lilly and Company mentioned.

The films were made at the Nutrition Clinic of the University of Cincinnati at the Hillman Hospital, Birmingham, Alabama, where studies were initiated in 1935, under the joint auspices of the Department of Internal Medicine of the University of Cincinnati and the University Hospitals of Cleveland. Subsequently, these investigations became a co-operative project between the Departments of Medicine of the University of Cincinnati and the University of Alabama, and the Department of Preventive Medicine and Public Health of the University of Texas.

EPILEPTICS IN AIR RAIDS

During the last few months there have been opportunities to observe the effect of unpleasant emotion on a group of about 250 epileptic children and 200 adults. The group comprises people of normal or retarded intelligence, but not of low-grade mental defect. There were days last summer of considerable air activity with fighting directly overhead and planes brought down in the immediate neighbourhood. There was no general increase of attacks on days or nights of air activity, nor has any evidence been found of increased fits in individuals. At least 95% of our patients have to all appearances been unperturbed, and the resultant mental upset in the remainder has not been striking. Are they heroes or stoics? Probably the latter. It may be suggested that many of them have increased resistance to painful mental impressions, as they undoubtedly have to painful physical impression, a resistance that is no doubt aided by defective imagination; but this is not altogether consistent with the hypersensitiveness which is claimed as a cardinal feature of the epileptic temperament. A further factor may be found in medication. Most of our patients are having anticonvulsant drugs in moderate doses, rarely exceeding bromide, gr. 30, or phenobarbital, gr. 2, in the 24 hours, and these have no doubt helped to discourage extra fits or mental upset. It need scarcely be said, perhaps, that the staff has had impressed on them the importance of appearing unconcerned in the face of danger, for our patients, with their immature outlook on life, will be more prone than other people to take their cue from those in authority. Moreover it must be said that although the noises, alarums and excursions without seemed sometimes to be very close at hand, so far we have not experienced (apart from a few broken windows and damaged tiles) any actual damage to person or property. Perhaps events so far have kept outside the circumference of the epileptic's well-known egocentricity. Bring them a little nearer home, and the results may be different.

So far as it goes, however, our experience has shown that acute emotional stress is without effect on the incidence of fits in people suffering from epilepsy, and gives rise to surprisingly little mental upset.

—*J. Tylor Fox, M. D., The Lancet, May 17, 1941.*

Medicine and National Defense

NEW METHOD FOR IMMEDIATE RECRUITMENT OF MEDICAL OFFICERS

The army has streamlined its method of commissioning medical officers. Five thousand physicians are needed at once. Eleven thousand additional will be needed by Dec. 31, 1942. Army officers' recruiting boards will proceed at once to the office of each state chairman for physicans of the Procurement and Assignment Service, to get in touch with physicians personally and commission them immediately.

INSTRUCTIONS FOR PHYSICIANS WISHING TO ENLIST

1. Return the procurement and assignment enrolment form and questionnaire which reached you last week. If you didn't get one, write immediately to the National Roster of Scientific and Specialized Personnel, 916 G Street N. W., Washington, D. C., for your forms.

2. Contact your state chairman of physicians for Procurement and Assignment Service at once, stating that you want to get into the service. Do this regardless of whether or not you have written to the Washington office of the Procurement and Assignment Service or the Surgeon General or have enrolled on the emergency enrolment form of last December. If you applied for commission more than thirty days ago, tell the state chairman you want to see the recruiting board. In Illinois — state chairman is Harold M. Camp, M.D., Monmouth.

3. The Surgeon General will not commission a physician unless he is certified as available by his state chairman of physicians for the Procurement and Assignment Service.

HOW COMMISIONS WILL BE SECURED

1. The Surgeon General and the Adjutant General have named teams of two officers and two clerks, who will procure the names of all available physicians who have volunteered from the state chairman for physicians of the Procurement and Assignment Service in your state.

2. These teams will have the authority to make final decisions on the application forms, to procure and make final decisions on the physical findings and to administer the oath of office immediately to those who qualify physically and professionally who are under the age of 45 and who are to be given the rank of lieutenant or captain.

3. These teams have the authority to initiate the applications and physical examinations and forward the papers with their recommendations direct to the Surgeon General for commission for all physicians under the age of 45 who might apparently be qualified for rank above that of captain.

4. These teams have the authority to initiate the applications and physical examinations and to forward to the Surgeon General direct the papers and their recommendations on all physicians 45 to 54 inclusive. The Surgeon General will make the final decisions and commission those for whom there are vacancies in this age group.

WHAT RANK MAY BE EXPECTED?

In order that all concerned in the procurement of additional medical department officers may give uniform advice to all applicants, the following summary of the policies which broadly govern the recommendations to be made to the

Adjutant General are published for your information and guidance:

(a) Basic Considerations.—(1) Appointments in the Army of the United States (medical department) will be recommended by the Surgeon General to fill authorized position vacancies for which no qualified medical department officers are available. The recommended applicants must possess the special qualifications required for such positions.

(2) Since no training or experience in civil life is analogous to that afforded by active military duty, no initial appointments will be recommended in grades above the lowest for assignment to tactical units.

(3) Position vacancies calling for grades above the lowest will, so far as possible, be filled by the promotion of qualified officers on active duty.

(b) Policy Governing Grades for Various Sections. —(1) Medical Corps: All appointments will be recommended in the grade of first lieutenant with the following exceptions:

(a) Captain: 1. Eligible applicants between the ages of 37 and 45 will be appointed in the grade of captain by reason of their age and general unclassified medical training and experience.

2. Below the age of 37 the following recognized training and experience will be considered in recommending initial appointments in the grade of captain: certification by an American speciality board; fellowship, American College of Surgeons or American College of Physicians; membership in other nationally recognized qualifying society or association, or the formal hospital training equivalent to that required by an American speciality board or other recognized training appropriate to the assignment for which recommended.

3. Eligible applicants who previously held commissions in the grade of captain in the Medical Corps (Regular Army, National Guard of the United States, Officers' Reserve Corps) may be appointed in that grade provided they have not passed the age of 45.

(b) Major: 1. Eligible applicants between the ages of 37 and 55 for whom there exist appropriate position vacancies, who are qualified for appointment as captain as outlined in paragraph (1) (a)2 and whose additional training and experience justify initial assignment as chief of service or section or executive officer in a large military hospital or other appropriate position, may be appointed in the grade of major.

2. Applicants previously commissioned as major in the Medical Corps (Regular Army, National Guard of the United States, Officers' Reserve Corps) whose training and experience qualify them for an appropriate assignment may be appointed in the grade of major, provided they have not passed the age of 55.

Rate of Pay

	With Dependents	Without Dependents
Lieutenant Colonel	$5,588	$4,676
Major	4,848	3,936
Captain	3,792	3,336
First Lieutenant	3,152	2,696
Second Lieutenant	2,196	2,196

(c) Lieutenant Colonel and Colonel: 1. In view of the small number of assignment vacancies in the grades of lieutenant colonel and colonel and the large number of reserve officers of these grades who have not been ordered to active duty, such appointments will be limited to specially qaulified applicants required for specific position vacancies which cannot be filled by promotion or by the activation of qualified reserve officers.

Note.—*a.* There are in the age group 24-45 more than a sufficient number of eligible qualified physicians to meet medical department requirements. It is on this age group that the Congress, through the Selective Service Act, has imposed the definite obligation of military service. Applicants beyond this age will be considered for appointment only if they possess the special qualifications required for assignment to positions appropriate for the grade of major or above,

b. Appointments for assignment to affiliated medical department units are made under special War Department authorization, and in grades authorized by appropriate tables of organization on recommendation of the authorities of the sponsoring institutions.

HOW SOON MAY ONE EXPECT TO ENTER SERVICE?

Immediate cooperation with the officers' re-

cruiting boards will result in a commission sooner than it could otherwise be obtained. A slightly longer period of time will obtain in the case of those referred to the Surgeon General for decision. In each case a period of fourteen days is granted between the administration of oath of office and the date of reporting for duty. If an officer desires to report before this fourteen day period has expired, he may do so by appropriate statement to the recruiting board. It is advised that no steps be taken to close one's office until after one has taken the oath of office.

SAM F. SEELEY, M. D.,
Executive Officer,
Procurement and Assignment Service.

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FROM SELECTIVE SERVICE SYSTEM

According to new instructions received from Washington, medical doctors must expect to serve in the armed forces of the Nation unless civilian or industrial needs or an extreme dependency status indicates retention in civilian life, it was announced by Col. Paul G. Armstrong, Illinois director of selective service.

"The shortage of these professional men has become seriously acute since war was declared," stated Colonel Armstrong, "and there is no question now that every qualified doctor must serve where he can render the greatest professional service to the Nation. The need of medical manpower in the Army is so urgent that it will work to the individual advantage of all doctors of military ages to take immediate steps to procure Army commissions."

It was further pointed out that each local board will be instructed that, if it finds that a physician within the military ages should not be deferred for reasons other than dependency, it shall take into consideration the pay and allowances such a registrant would receive in the event he is commissioned in the armed forces and proceed to classify him. It is expected that, in practically all such cases, the amount he would receive from commissioned service will be sufficient to eliminate the question of dependency.

The new instructions involve a change from Corps Area Committee of Procurement and Assignment Service to separate State Chairmen and also provide that the local boards will consult with the respective State Chairmen of the Procurement and Assignment Service before classifying a doctor. The chairman for Illinois is Dr. Harold M. Camp, 224 South Main Street, Monmouth.

Major E. Mann Hartlett, State Medical Officer.

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FROM WAR DEPARTMENT MEDICAL DEPARTMENT OFFICER RECRUITING BOARD

THE PRESENT STATUS OF THE PROCUREMENT OF MEDICAL OFFICERS FOR THE UNITED STATES ARMY

The necessity of securing medical officers for the military and naval services, and at the same time of insuring that no community would be stripped of essential medical personnel, led to the organization of the Procurement and Assignment Service. This Service determines which of the professional men are essential to the health and welfare of their community and clears for military service all medical men who are not essential in the above sense.

In order that physicians may be more quickly brought into the Army, to overcome an acute shortage, and to provide for present and future military requirements, the War Department has established in the several states Medical Department Officer Recruiting Boards. The primary function of the Medical Department Officer Recruiting Board, which in this state is located at 30 North Michigan Boulevard, Chicago, Illinois, is to seek applications for commissions in the Medical Corps from doctors who are declared available by the Procurement and Assignment Service. In addition, this Board is authorized to actually issue commissions in the grade of Captain and 1st Lieutenant to doctors in the age bracket of 21 to 44 inclusive.

The procedure in making application for a commission in the Medical Corps is as follows:

1. *Write* the Medical Department Officer Recruiting Board, 30 North Michigan Bouelvard, Chicago, Illinois, requesting application blanks and authorization to take a physical examination: This is the only office where Medical Corps applicants will be interviewed.

2. Application blanks will be sent to you immediately. Obtain the physical examination at

the military post designated in the authorization which you will receive.

3. Promptly return your application to the Medical Department Officer Recruiting Board. A report of your physical examination will be mailed directly to the Board by the military post where it is accomplished.

The Board will assemble all required papers from all sources and notify you to appear personally to discuss your application and receive your commission.

Adequate time will be allowed newly commissioned officers to permit them to arrange their personal affairs before being ordered to duty.

The rank a doctor may receive will depend upon his age, training, experience and qualifications. The Board will carefully evaluate these factors in the case of each applicant. Certain regulations are laid down by the War Department in regard to rank. These regulations do not permit of bargaining on the part of the applicant for higher grades as compensation for immediate application. Contrary to opinion prevalent in some circles it will not be possible to secure higher grades by waiting until some future date before seeking a commission. Conversely, if a doctor is drafted he will serve initially as an enlisted man.

Selective Service has recently ruled that dependency is not a basis of deferment in cases where registrants are eligible to receive commissions in the armed forces.

This Nation is at war; there is an acute shortage of physicians for the present and future needs of the armed forces; the procedure of obtaining a commission has been simpiified; and so it is incubent upon each and every available physician between 21 and 44 to apply for a commission in the military forces. If you are requested by the Medical Department Officer Recruiting Board to make such application you will know that you have been declared available by the Procurement and Assignment Service and you are urged to seek a commission without delay.

R. F. Olmsted, Lt. Col. Medical Corps, U. S. Army. Room 828, 30 No. Michigan Ave., Chicago.

OCCUPATIONAL DEFERMENTS OF DOCTORS, DENTISTS AND VETERINARIANS

The following memorandum (I-420) was sent to all state directors by Lewis B. Hershey, director of the Selective Service System, Washington, D. C. This amendment involves a change from Corps Area Committee of Procurement and Assignment Service to separate state chairmen for medical doctors, dentists and doctors of veterinary medicine and also a change with respect to the consideration of dependency in classifying such registrants.

NATIONAL HEADQARTERS
SELECTIVE SERVICE SYSTEM
21st Street and C Street N. W.
Washington, D. C.

January 28, 1942
Amended 4/28/42

MEMORANDUM TO ALL STATE DIRECTORS (I-363)
LOCAL BOARD RELEASE (89)

SUBJECT: Occupational Deferments of Medical Doctors, Dentists and Doctors of Veterinary Medicine (III).

1. Information previously distributed by this headquarters clearly indicates an overall shortage of medical doctors, dentists and doctors of veterinary medicine in the nation. Since war was declared, the shortage of these professional men has become acute. It is now manifest that every qualified doctor, dentist and veterinarian must serve where he can render the greatest professional service to the nation.

2. In order to accomplish this purpose, the President, by executive order, has formed the Procurement and Assignment Service. This service was formed primarily for the purpose of gathering and making available information with respect to the supply of qualified practitioners in the fields of medicine, dentistry and veterinary medicine, with a view of securing the most effective allocation of medical manpower as indicated by the requirements of the armed forces, civilian needs and industrial medicine.

3. To work with the headquarters of the Procurement and Assignment Service there has been appointed for each state and the District of Columbia a state chairman for medical doctors, a state chairman for dentists and a state

chairman for doctors of veterinary medicine. These state chairmen will secure information concerning their respective professions and will give advice regarding the allocation of medical manpower.

4. When considering the classification of any registrant who is a qualified medical doctor, dentist or doctor of veterinary medicine, the director of Selective Service desires that local boards, through the state director, shall consult with the respective state chairman of the Procurement and Assignment Service.

5. In considering the classification of a registrant who is a qualified medical doctor, dentist or doctor of veterinary medicine, the local board may, if it finds such registrant should not be deferred for reasons other than dependency, take into consideration the pay and allowances which such registrant would receive in the event he is commissioned in the armed forces. In practically all instances the pay and allowances of such registrant, if he was commissioned as an officer, would be sufficient to eliminate the question of dependency.

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COMMISSIONS FOR MEDICAL STUDENTS

1. The War Department on May 8 granted authority to corps area commanders to waive the provisions of paragraph 5, AR 140-33 and paragraph 7*b*, AR 605-10, for the appointment as second lieutenant, Army of the United States (Medical Administrative Corps), of physically qualified male citizens of the United States above the age of 18 years who are bona fide accepted matriculants at approved medical schools within or without the United States. Officers so appointed will not be ordered to active duty until eligible for appointment as first lieutenant, Army of the United States (Medical Corps).

2. *a.* Appointment will be made without reference to an examining board as prescribed in paragraph 20 *c*, AR 140-5, and without reference to procurement objectives.

b. Appointment will be made without a report of physical examination (WD AGO Form No. 63). Authority is granted to waive the provisions of Section VI, AR 605-10.

c. Application and accompanying papers as prescribed in AR 605-10 (except report required by paragraph 10*a* (2) (*b*), as amended, will be forwarded by the dean of the medical school to the commanding general of the corps area in which the school is located, together with a certified statement that the applicant is a bona fide accepted matriculant in medicine at the institution.

d. Students attending schools outside the limits of the United States will be charged with the responsibility of proper notification to the deans of the respective schools in order that the applications and accompanying papers as prescribed in paragraph 2 *c* (above) are forwarded to the commanding general of the corps area of permanent residence of the student.

e. Officers appointed under the provisions of this letter will be discharged for the convenience of the government under the following circumstances:

(1) Discontinuance of medical education.

(2) Matriculation at an unapproved school of medicine.

(3) Failure to complete successfully the prescribed full course of medical instruction.

(4) Failure to secure appointment in the Army of the United States (Medical Corps) within one year after completion of the prescribed full course of medical instruction.

f. The Surgeon General will maintain adequate records to assure timely application for appointment as first lieutenant, Army of the United States (Medical Corps), and to assure that individuals are promptly reported to the Adjutant General for discharge as provided above.

3. Properly certified applicants for and qualified students at approved schools of medicine, dentistry or veterinary medicine who already hold Reserve commissions in other arms or services will not be ordered to active duty until they:

a. Come within the provisions of 2 *e* (1), (2), (3), or (4) above, or

b. Successfully complete the prescribed full course of medical instruction, in which latter event they may be appointed in the Medical Corps, Army of the United States, in the grade of first lieutenant.

4. Properly qualified students will be invited to submit applications for appointment, final approval in each case to be made by the commanding general of the corps area in which the properly qualified student maintains permanent residence. The commanding general of each corps area is granted the authority to make such appointments.

5. Notice of appointment will be in the following form:

Date

Subject: Temporary Appointment.

To: 2d Lt. John Henry Doe, MA-AUS, A 0-0,000,000
549 North Blank Street, New York, N. Y.

1. By direction of the President you are temporarily appointed and commissioned in the Army of the United States, effective this date, in the grade and section shown in address above. Your serial number is shown after A above. You will not perform active duty under this appointment until expressly ordered to active duty by competent authority.

2. This commission will continue in force during the pleasure of the President of the United States for the time being, and for the duration of the present emergency and six months thereafter unless sooner terminated.

3. There is enclosed herewith a form for oath of office which you are requested to execute and return promptly to the agency from which it was received by you. The execution and return of the required oath of office constitute an acceptance of your appointment. No other evidence of acceptance is required.

4. This letter should be retained by you as evidence of your appointment, as no commissions will be issued during the war.

6. Each appointee will be in the Arm and Service Assignment Group. On each copy of notice of appointment except the original a notation "A. & S. A. G." will be placed in the lower left hand corner.

. . . . . .

10. If an appointment is declined or canceled, the record will be filed at corps area headquarters and no report made to this office or to that of the Surgeon General.

11. Department commanders will, in general conformity with this letter, submit to this office individual recommendations for appointment.

12. The letter from this office of Feb. 11, 1942, AG 210.1 Med-Res. (1-26-42)RB-A, Subject: "Commissions for Medical Students," is rescinded except paragraph 5 thereof.

By Order of the Secretary of War:

J. A. Ulio,
Major General,
The Adjutant General.

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JOINT STATEMENT BY OFFICE OF CIVILIAN DEFENSE AND AMERICAN RED CROSS

To secure unit of effort and avoid duplication of facilities in meeting civilian needs arising from enemy action, this statement is issued by the Office of Civilian Defense and the American National Red Cross for the guidance of defense councils and Red Cross chapters.

It is the responsibility of local defense councils to see that adequate provision is made for all services required in the event of bombing or other enemy attack. During an emergency period the commander of the Citizens' Defense Corps will exercise control over all such services.

With respect to emergency medical services and emergency feeding, housing and clothing, provision should be made in each community in conformity with the following principles:

EMERGENCY MEDICAL SERVICES

During bombing or other enemy attack, all services are directed from the control center in charge of the commander of the Citizens' Defense Corps. Responsibility for the care of those injured as a result of enemy action rests with the Emergency Medical Service of the Citizens' Defense Corps under the direction of the chief of the Emergency Medical Service.

Red Cross chapters assist the Emergency Medical Service by (*a*) recruiting and training volunteer nurses' aides, who will be utilized by the Emergency Medical Service at base and casualty hospitals, casualty stations and first aid posts; (*b*) furnishing lists of persons trained in first aid to be enlisted by the Emergency Medical Service as members of its stretcher teams; (*c*) providing dressings, bandages and supplementary equipment as the chapter may decide in consultation with the chief of Emergency Medical Service; (*d*) equipping and operating emergency ambulances to be assigned to the Emergency Medical Service and to serve under its direction; (*e*) providing supplementary transportation for walking injured and for Emergency Medical Service personnel. During the emergency period, abulances and motor units assigned to such transportation service will be under the direction of the chief of Emergency Medical Service or the transport officer. The Emeregncy Medical Service of the Office of Civilian Defense will not be duplicated by the Red Cross but will be utilized by the Red Cross in natural disasters.

EMERGENCY FEEDING, HOUSING AND CLOTHING

In the joint statment dated April 17, 1942 of the Office of Defense Health and Welfare Services and the American Red Cross it is agreed: "With respect to the emergency period during which special facilities must be made available to meet emergency needs without notice, the Federal Security Administrator will look to the local facilities and resources of the American Red Cross to provide food, clothing and temporary shelter." These services will be provided locally during an emergency period by the Red Cross under the control of the commander of the Citizens' Defense Corps in accordance with detailed plans to be worked out jointly by the commander, the Red Cross chapter and the public welfare authority.

Defense councils should avoid duplication of these facilities. Where an Emergency Food and Housing Corps has already been organized and equipped to the satisfaction of the commander of the Citizens' Defense Corps, its function should be coordinated with the functions of the public welfare authorities and the Red Cross chapter and if possible consolidated.

After the emergency period the appropriate public agencies are expected to undertake the care of civilians in accordance with plans developed in conjunction with the Office of Defense Health and Welfare Services and the Federal Security Administrator. Funds will be made available for this purpose by the federal government through the Federal Security Administrator. Local welfare agencies and Red Cross

chapters should be guided in their relationships by the agreement signed on April 17, 1942 by the Office of Defense Health and Welfare Service and the American Red Cross.

All Red Cross volunteers enlisted in the emergency feeding and housing service, and all other Red Cross volunteers who are to be in service during and following bombing or other enemy action, will register with the local Civilian Defense Volunteer Office. The cards of all such registrants are to be marked so as to show that these volunteers are in Red Cross Service. In order to obtain necessary freedom of movement during and immediately after enemy action, Red Cross personnel certified to the commander by the chapter for emergency feeding, housing and clothing services will be furnished with identification cards issued to Citizens' Defense Corps personnel and will be authorized to wear the official armband.

This statement supersedes the joint statements of Sept. 4 and Dec. 22, 1941.

NORMAN H. DAVIS, Chairman,
American Red Cross.
Approved May 18, 1942.

JAMES M. LANDIS, Director,
Office of Civilian Defense.

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TO THE EDITOR:—

Regulations for the administration of the Blood and Plasma Bank Program of the Medical Division of the United States Office of Civilian Defense have now prescribed, and funds are available for grants to assist approved hospitals in establishing blood and plasma banks. Only hospitals within 300 miles of the Atlantic, Pacific or Gulf coasts are eligible for such grants. After July 1, 1942, these geographical restrictions may be modified, so that grants may be made to inland hopitals. Applications should be addressed to the Chief Medical Officer, United States Office of Civilian Defense, Washington, D. C.

Technical manuals on blood and plasma banks, prepared by the Subcommittee on Blood Substitutes of the Division of Medical Sciences, National Research Council are now available for distribution on request of any hospital to the Chief Medical Officer, Office of Civilian Defense.

The Red Cross has established eighteen donor centers in various parts of the country which are successful in obtaining an adequate supply of blood donors for military purposes. Blood for the production of dried plasma for Civilian Defense purposes will also be obtained from these sources.

Hospitals which establish their own blood and plasma banks with the financial assistance of the Office of Civilian Defense are advised to build up their reserves of blood and plasma by expanding blood collection from relatives and friends of patients who are to receive transfusions. A public campaign for volunteer donors which may compete with the work of the Red Cross should be avoided if possible. If public solicitation is necessary, hospitals should appeal to the local chapters of the American Red Cross for assistance in recruiting hospital donors. Blood donor campaigns by agencies other than the Red Cross will tend to confuse the public and may interfere with the blood collection by the Red Cross for the armed forces.

George Baehr, Chief Medical Officer, Office of Civilian Defense, Washington.

REGULATIONS GOVERNING GRANTS TO HOSPITALS FOR ESTABLISHING RESERVES OF BLOOD PLASMA

WHEREAS: on April 11, 1942, there was allotted from the "Emergency Fund for the President" to the United States Public Health Service the amount of $292,500, "to be expended by said Public Health Service in connection with emergencies affecting the national security and defense for procuring and establishing either independently or, subject to regulations to be promulgated by the Surgeon General, by grants to public and private hospitals located not more than 300 miles from ocean or Gulf Coast, reserves of liquid, frozen or dry blood plasma or serum albumin for the treatment of casualties resulting from enemy action," the following regulations are promulgated to govern the administration of this allotment:

SECTION I. ELIGIBILITY FOR GRANTS

Preference shall be given to hospitals serving communities whose geographical location implies a likelihood of civilian casualties from enemy action, and which are inadequately equipped to handle such casualties.

To be eligible for a grant a public or private hospital located not more than 300 miles from ocean or Gulf Coast* shall:

(1) Have a capacity of not less than 200 beds, exclusive of bassinets, provided that two or more smaller hospitals totaling 200 beds may submit a cooperative project designating one of the participating hospitals as the grantee;

(2) Be on the approved list of the American College of Surgeons and the Hospital Register of the American Medical Association;

(3) Have on the professional staff a physician

Note: the Appropriation Act for the fiscal year 1943 may not limit grants to hospitals within this geographical area.

whose qualifications are the equivalent of those required by the American Board of Pathology for its diplomates.

SECTION II. APPROVAL OF PLANS

A grant shall cover a period of not more than twelve months following the approval of the plan, or not beyond June 30, 1943, and may be used only for the purchase of equipment necessary for the preparation of liquid or frozen plasma, reconditioning or minor alterations of existing quarters, necessary travel and subsistence allowance of $6.00 per diem to cover a training period, if required, of not more than one week, for the physician directing the blood plasma project, and temporary salaries of personnel necessary for the establishment of a blood and plasma project.

The maximum grant for one hospital is $2,000.

A hospital desiring to receive a grant shall submit a plan to the Chief Medical Officer, Office of Civilian Defense, who is authorized to receive such plans on behalf of the Surgeon General of the United States Public Health Service. A plan shall contain the following information:

(1) The number of hospital beds classified according to use;

(2) The name and qualifications of the physician who will direct the plasma project;

(3) Description of present blood and plasma project, if any;

(4) The type and amount of plasma reserves which the institution desires to prepare;

(5) The delivered price of equipment necessary to complete the existing facilities for preparing such plasma — such items to be numbered and described in accordance with the equipment inventory in "A Manual on Citrated Normal Human Blood Plasma," issued by the Office of Civilian Defense, or equivalent approved substitute equipment.

(6) The materials or labor, if any, needed for adapting existing quarters to the needs of the blood plasma project;

(7) The salaries, if any, to be paid additional personnel until the plasma reserve has been prepared. Salary items shall also show the proposed periods of employment for each individual and the proposed monthly rates of pay.

When a plan is recommended by the Chief Medical Officer of the Office of Civilian Defense for the approval of the Surgeon General, the hospital will be furnished a budget and acceptance form to be signed, notarized and returned to the Chief Medical Officer, Office of Civilian Defense.

SECTION III. CONDITIONS OF GRANTS

(1) The hospital shall agree to build up a plasma reserve of at least one unit per bed within three months after delivery of the necessary equipment. A unit of plasma is that amount derived from 500 cc. of citrated whole blood, consisting of about 250 cc. of liquid plasma;

(2) The agreed amount of plasma reserve shall be maintained for use without charge and only for treatment of casualties caused by enemy action. The reserve shall be released for use in other local hospitals for this purpose on order of the local Chief of Emergency Medical Service and for transfer within the state on order of the State Chief of Emergency Medical Service, or transfer from one state to another on the order of the Regional Medical Officer, Office of Civilian Defense;

(3) Liquid plasma shall be kept from being outdated by replacement of older by newer plasma. Replaced units may be utilized for current needs of the hospital in the treatment of its regular patients, provided the plasma reserve shall not be allowed to fall below the stated minimum;

(4) All Plasma shall be prepared in accordance with manuals of the Office of Civilian Defense prepared by the Subcommittee on Blood Substitutes of the National Research Council;

(5) The hospital shall agree to continue the plasma project for its current needs after the expiration of the Federal Grant and to maintain for the duration of the war the minimum stated reserve; thereafter the reserve may be used by the hospital without restriction;

(6) A record shall be kept of all blood donors, including their blood types, to expedite obtaining donors for emergencies;

(7) No funds made available under the grant shall be used for the payment of blood donors;

(8) Any blood plasma project under this program shall be subject to inspection by authorized representatives of the Surgeon General of the Public Health Service.

SECTION IV. METHOD OF PAYMENT

Payments will be made on a reimbursement basis for expenditures made in accordance with the approved budget. Applications for reimbursement shall be notarized and addressed to the Chief Medical Officer, Office of Civilian Defense. The procedure for payment will be as follows:

(1) Payments from the allotment to cover the purchases of non-expendable equipment aggregating $300 or more will be paid upon receipt from the authorized administrative head and accounting officer of the hospital, of an itemized statement of the purchases supported by invoices showing the date of delivery of such equipment.

(2) Payment will be made for the authorized training expenses of the physician who is to direct the blood plasma project whenever the hospital presents a notarized claim itemizing the travel and per diem allowance incident to the training;

(3) Reimbursement for other items of the approved budget will begin only after actual production of blood plasma is started. During the first three months of production, reimbursement will be made on a monthly basis and quarterly thereafter for the duration of the grant. Such reimbursement will be made only upon receipt of a report form prescribed by the

Surgeon General from the institution showing expenditures incurred during the period, total plasma prepared during the month, and the total reserve on hand to date;

(4) Payments may be withheld, and plasma produced as part of this project may be transferred by the Surgeon General, from any hospital which fails to meet the conditions of the grant or to comply with the regulations;

(5) Each hospital shall submit monthly reports during the period of the grant showing the amounts of plasma on hand and used; thereafter, for the duration of the war the hospital shall submit such reports quarterly on its use of the plasma;

(6) Hospitals shall submit promptly reports including clinical abstracts of any untoward experiences encountered in the use of plasma for the duration of the war.

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INTENSIFY DRIVE FOR MORE NURSES FOR WAR DUTY

The national director of the Red Cross Nursing Service, Miss Mary Beard, stated on April 18 that the problem of supplying nurses to meet the constantly increasing demands of the Army and Navy is still a serious one, although seven thousand registered nurses from every section of the country have volunteered since Pearl Harbor for war duty through the Red Cross. This figure represents an all time peak in enrolments and is 50 per cent above the same month a year ago and more than were registered during the entire year of 1940. Nevertheless, a thousand additional trained nurses must be recruited each month this year.

Miss Beard also announced the creation of a student nurse reserve and the assignment of representatives of each of the nine army corps areas to stimulate enrolments further. Senior students in qualified schools of nursing will be given an opportunity to sign up with the Red Cross through the new student nurse reserve, and on completion of their final year and state registration they automatically become members of the reserve and eligible for assignment to the Army and Navy. Representatives in each senior class are being appointed to assist local Red Cross nursing committees to build up the new reserve. The special representatives on enrolment in the nine army corps areas will begin immediately and will assist army nurse corps captains in enrolment routines and in checking the qualifications of nurses volunteering for service with the armed forces.

The formation of many army affiliated medical units requiring from fifty to one hundred and twenty nurses each has increased further the need for nurses, and only Red Cross first reserve nurses are eligible for assignment to these hospital units, which will serve in camps here and abroad. The age limit for nurses in these units has been raised to 45 years, but for other army commissions nurses must be between the ages of 21 and 40.

THE CHICAGO LOYOLA UNIT

U. S. Army General Hospital No. 108 is being organized at Loyola University School of Medicine, Chicago, and will be ready for preliminary training in a short time. The applicants for the fifty-seven medical positions in the unit must be graduates of Loyola, according to Dr. George T. Jordan, Chicago, director of the unit. The one hundred and twenty nurses will be from Mercy Hospital, St. Bernard's Hospital, St. Elizabeth's Hospital and Columbus Hospital in Chicago, St. Francis Hospital in Evanston and St. Anne's Hospital in Oak Park.

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THE ARMY NEEDS BACTERIOLOGISTS, BIOLOGIC CHEMISTS, SANITARY ENGINEERS AND ENTOMOLOGISTS

The Surgeon General's Office has announced that there are vacancies in the Sanitary Corps of the Army for bacteriologists, biologic chemists, sanitary engineers and entomologists. Applicants desiring to apply for commissions in the Sanitary Corps should write to the Office of the Surgeon General and state their college training and civilian experience in detail.

Applicants must have had at least four years' actual experience, and in the case of bacteriologists this must be in medical diagnostic and public health bacteriology; in the case of biologic chemists, in diagnostic and public health biologic chemistry, including blood, urine, food, water and sewage chemistry and toxicology; in the case of sanitary engineers, experience must include at least two of the following activities: mosquito control, rodent control, water supplies and sewage treatment. Applicants also must have completed a four years course in college during which special emphasis was laid on studies in the field in which they desire to be commissioned in the Sanitary Corps. The receipt of a higher degree, Master of Science or Doctor of Philosophy, may be substituted for a part of the four years actual experience required. A professional examination is not required. Additional details concerning the qualifications of applicants for commissions in the Sanitary Corps may be obtained on request to the Surgeon General's Office, U. S. Army, Washington, D. C.

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We may not be our brother's keeper, but we can and do catch his colds and flu (and tuberculosis). Mildred Edie. Survey, Apr. 1942.

Aliens who strike at dawn without warning, killing and maiming our young men, are no more successful in their onslaught than tubercle bacilli that strike youth insidiously at the first flush of adult life. Nor is it any more permissible for those who direct the destinies of college students to be blind and deaf to repeated warnings of the menace that wounds and slays than it would be for a commander to awaken to danger only after the foe had delivered a damaging blow. Charles E. Lyght, M.D. Journal-Lancet, Apr. 1942.

Original Articles

THE INFLUENCE OF WAR ON THE PRACTICE OF MEDICINE

President's Address

CHARLES H. PHIFER
CHICAGO

The future status of medicine is a subject that has engaged the interest of the medical profession more and more during the past ten years. The depression brought in its wake many acute problems with which we have been able to cope with more or less success. Now that we are engaged in a total war, we are confronted with an entirely new set of problems, in addition to those brought about by the economic upheaval of ten years ago.

The depression caused a disintegration of the mode of life of large groups of the population and resulted in many of them becoming dependent upon the Government for support. Federal and State legislation enacted since that time to provide the necessities of life for these people has also affected the medical profession, in that the administration of their medical care has become a part of the all-embracing government program. The fact that this condition has endured for ten years has raised in the minds of many of us a question as to the future status of medicine. This question becomes especially acute now that we are engaged in a total war.

This is a total war not only from th standpoint of the type of warfare, but also in the number of our people who are involved. It is now estimated that we will raise an army of about six or 9 million men, and that there will be about 58 million men and women enrolled to help provide food, ammunition and supplies for the forces in the field. The enrollment of so vast a number of people in one cause, diverting all its energies to one effort, must cast a great influence on the future welfare of the entire nation.

One must consider the future from many angles:

1. The effect of war on medical care of the civilian population.

2. The effect of war on care of the military forces.

3. The effect of war on medical education.

4. The effect of war on the reconstruction period. By this I mean the returning of men in the armed forces, as well as those engaged in the defense program, to civilian life, and all of them finding gainful occupations. In postwar reconstruction one must think of the great number of the population who have been uprooted from their previous environment and occupation because of military service and war effort; these must be returned to civilian life and to the necessity of finding gainful employment in private industry.

5. The number of men in the military forces who will be potential governmental responsibilities.

6. The number of people now engaged in the defense program who, following demobilization, will never again be self-supporting.

In World War One, more than one-quarter of the medical men in the United States were called into service. Little planned thought was

Given at the 102nd Annual Meeting, Springfield, May 20, 1942

given to the medical care of the civilian population. We all remember that the influenza epidemic of 1918 took a large toll of the overworked physicians who had this responsibility.

In this new crisis, careful plans are being made for the provision of essential men for the military forces, the civilian population and essential industry. The practical application of these plans remains to be completed. The fact that selective service now includes all men under the age of 45 will no doubt deplete our younger group of physicians. The present urgent demands for a large medical corps, the majority of whom will be under 37 years of age, will no doubt reduce the number of men available for residencies in the special fields of medical training. It is not unlikely that we will be compelled to abandon this type of training until the war is over. The accelerated teaching program of our medical institutions which has been approved by the Army and Navy will make available about 5000 graduates a year. The fact that many of our younger group of teachers will be called by selective service may deplete our faculties. Therefore, many of the older members of the faculties will be required to resume active teaching schedules. It is to be hoped that we will be able to continue our highly efficient methods of teaching. This remains to be seen. Hospitals must standardize the length of their interneships to one year to conform to the stipulations of selective service regulations. Hospital staffs in general will be compelled to designate the majority of their physicians under the age of 45 as available, the essential group to be found in those above that age. I may say here that it is the intention of the Procurement and Assignment Service, as well as the Surgeon-Generals of the Army and Navy, that physicians serving in the medical corps will be assigned to that field for which their medical training has adapted them.

It is my impression that these radical changes in medical education brought about by the accelerated program should lead to an excellent opportunity for highly qualified and specialized postgraduate teaching after the war.

The care of the civilian population in those areas where physicians have entered military service should be given earnest consideration by the State Medical Preparedness Committees in order that no district will be without adequate medical care. Those physicians who have entered military service have entrusted to those who remain at home, the care of their patients and the safeguarding of their interests. Those who remain must accept this trust.

It is essential that medical men who enter military service undergo a standardized amount of military training. They must become familiar with new technics in the medical care of large numbers of people, often under inadequate and hazardous circumstances.

It has been demonstrated repeatedly that war contributes to the advancement of medicine. Distinct advances have resulted from every war in which we have been engaged during the last century. Following the Civil War with its devastating toll from typhoid fever and other camp diseases, sanitation came into being. A direct result of the Spanish-American War was the conquest of yellow fever. The First World War offered unprecedented opportunities to physicians and surgeons, and as a result of their experiences medical achievements in the past twenty-five years have probably been greater than in any preceding quarter-century.

In the present war, where our soldiers and sailors will traverse every land and sea, many diseases will be encountered not ordinarily found in their native land. Thus there will be more and more opportunities for medical achievement. The massing of great armies drawn from every environment and every part of the land, gives an opportunity for the study of disease conditions seldom found in private practice. The possibility of pandemics and epidemics of contagious diseases must not be forgotten.

There are at this time more than 200 of our medical scientists actively engaged in research work, the results of which will be carefully correlated with the medical work of the Army and Navy.

The First World War taught us the value of teamwork and specialization. The physical examination of men drawn into military service gave valuable information on the physical and mental infirmities of a large number of the population, as well as on the problems concerning their economic status. Many of our medical men acquired a broader experience and proficiency, and the ability to assume greater re-

sponsibilities. Many discovered new and greater fields of endeavor, and changed their environment for one of greater scope following the war.

It is unnecessary to recount in detail the medical achievements discovered or elaborated as a result of medical service in the last war. To mention but a few, we have the improved treatment of war wounds, and improved technic of debridement; the proved value of splinting and immobilizing extensive wounds of the soft tissues; the Carrel-Dakin treatment; the use of newer dyes as disinfectants. Great strides were made in management of fractures and joint surgery, especially in infected joints. The technic and the possibilities of blood transfusions were early recognized. Much was learned of acute and sub-acute infections, and the fact that bacteria may lie dormant in healed wounds with reactivation upon slight trauma.

In the present war we have learned from the experiences of those who cared for casualties at Pearl Harbor, the type of warfare we may expect to encounter today, namely bombing and machine gun attack. We have seen the influence of chemotherapy in the management of wounds. The majority of the injuries were multiple lacerated wounds, compound comminuted fractures and burns, and we have reports of the role sulfanilamide played in their care. Much work is being done in improvement of means of collection and transportation of blood plasma for use in evacuation hospitals.

Throughout the centuries the triple scourge of war has been pestilence, famine and epidemics. The hazards of typhus, plague and deficiency diseases are not yet conquered. The massing of recruits from various localities increases prevalence of all the epidemic diseases. In spite of all our advances in knowledge of cause and prevention of disease, epidemics will prevail. Influenza, cerebrospinal fever, pneumonia, dysentery, typhus and malaria, each took a toll in the World War. Malaria still continues to be a serious problem. The recent reports regarding the value of large doses of Vitamins K and C in wound healing will no doubt contribute greatly to the end results in many war injuries.

The migration of thousands of defense workers to new areas presents additional medical-social problems. In many parts of the country physicians have had to be transported to these areas to render medical care. In many places sanitation was utterly inadequate or entirely lacking.

It is also to be noted that there is a great increase in industrial accidents in war time, probably due to the many inexperienced workers in defense plants. Night work is necessary, therefore health standards are reduced. Occupational diseases are bound to increase. The class from which the laborer is usually drawn is one frequently susceptible to tuberculosis. In this class, also, vitamin deficiencies in a subclinical state are most frequently demonstrated.

In the question of post-war reconstruction, thought must be given to the fact that many changes were essential to meet the demands of our war effort. Conversion was the greatest single problem that American industrial ingenuity had ever been called upon to face. This great defense program necessitated the shifting of hundreds of thousands of our population into new areas. To readjust this multitude to normal life, it is only fair to assume that when the war is over, the majority of industries transferred into defense work will be compelled to revamp their activities and start anew from scratch.

The American people have no doubt that we shall win this war, no matter how long it takes or what it costs. The majority of people are, however, very pessimistic about the post-war future. A recent poll of public opinion reports that 70 per cent of people believe that after the war we shall all have to work harder; 60 per cent believe pay will be lowered; 43 per cent believe that prices will be higher, and 61 per cent believe that there will be a great deal of unemployment. They believe that even when victory is obtained we will all have to endure a drastic lowering of our standards of living, and that there will be unemployment on a very extensive scale. Many of the unemployed will become the responsibility of relief agencies. The vast majority of them live under unsanitary housing conditions. The overtaxing of sanitary facilities in many communities will present medical problems as great as or greater than those during the depression.

The cause of unemployment during recent years was the collapse of industry. What then

will be the condition of our country with reference to employment after the war? Can private enterprise furnish a job for everyone who wishes to work and is physically fit to work? It is a matter of general opinion that if unemployment is to be averted, the Federal Government will need to develop some comprehensive program, flexible enough to help devise and finance methods to include all types of unemployment. It is logical to surmise that in view of the present national indebtedness these projects on a gigantic scale will be impossible.

The big question then in the post-war future will be the demobilization of the armies and the changing of industries from defense to peace time projects. What then will become of the millions of people who have disassociated themselves from their previous environments to that of defense projects? Unless they are returned to industry many of them again will return to State and Federal dependency.

The fact must not be overlooked that following demobilization of military and industrial armies there is always a period of restlessness and a trend toward political, social and economic wreckage.

It should not be forgotten that it is fundamental in our form of government that the crisis of war provides a government with extraordinary powers. When the sovereignty of the government is threatened, that government, even though democratic, must waive or declare a moratorium on the rights of individuals or groups of individuals, which if exercised would endanger the sovereign state itself.

The problem of the future medical care of the millions of men who will be demobilized from the fighting forces is a major question. The majority of you remember the great controversies following the last war, on the question of limiting government hospital facilities to service-connected cases. There is at this time much agitation on the question of immediately increasing the building program of Veterans Administration facilities to accommodate the veterans of this war on the same basis as heretofore, namely, service connected and non-service connected disabilities. I would like to call your attention briefly to some facts:

During the past 22 years there has been made available a total sum of $208,703,029 for construction of facilities for veterans. In June, 1941, there were 61,849 hospital beds under control of Veterans Administration. Funds have been definitely obligated and allocated for new construction to provide for 1479 additional beds in veterans hospitals in 1942 and 1943. In 1941 there were in 91 veterans hospitals a total of 51,911 world war veterans, receiving treatment. Of this number, 77 per cent were being treated for non-service disabilities. The question then arises concerning future hospital care for service men participating in the present war. Careful consideration should be given to what the future effect will be on the practice of medicine, if the same procedure is followed in extending medical care for non-service connected disabilities, to our present and future military forces of from 6 to 9 million men.

There is a changing attitude of the public toward the government, in that many citizens are willing to accept paternalism, to depend upon the government for aid and allow it to regulate their daily affairs. This is borne out by the statement of the late Calvin Coolidge: "There are always those who are willing to surrender local self-government and turn over their affairs to national authority in exchange for payment of money out of the federal treasury. Whenever they feel that conditions in their environment need correction, instead of endeavoring to apply a remedy themselves they seek to have a tribunal sent from Washington to take over their duties, heedless of the fact that in accepting such supervision they are bartering away their individuality of action. Such moves are always made on the assumption that they are a public benefit."

It is thus evident that in future years the burden of direct relief probably will become greater and greater. While the armament boom has caused some reduction in relief rolls, later on they will undoubtedly have to take on the greatest burden in their history.

It is an historical fact that in every country on the globe there has been a tendency toward socialization subsequent to war. The gigantic post-war turmoil that will follow this international catastrophe undoubtedly will increase the possibility of drastic social changes in America. One need only review the events of the past

few years to understand that many new limbs are being grafted onto our social structure, not a few of which are patterned after those of European countries. The passing of the Social Security Act evidences this trend. As orginally drafted, its beneficiary categories were definitely limited. What influence the war will have on its scope remains to be seen. However, it is significant that the most recent proposals for amendments to the Social Security Act recommend: "An increase in the coverage of old age and survivors' insurance, addition of permanent and temporary disability payments and hospitalization payments beyond the present benefit programs, and liberalization and expansion of unemployment compensation in a uniform national system."

We all know that in this country there has been a growing trend toward socialization of medicine during recent years, its proponents urging that it be brought about as a means of distributing medical care to all the under-privileged. There are at this time a number of bills awaiting action before Congress, proposing to extend the federal old age and survivors' insurance benefits of the Social Security Act to employees of religious, charitable, scientific, literary or educational organizations, and to certain other groups of employees now exempt, such as domestic help and farm employees; to provide financial assistance or other assistance, *including medical and dental aid,* to needy transients, etc. In view of the above, it is logical to expect that in the post-war period many of the problems of the medical profession will be intensified.

In summary, the influences of this war on the future practice of medicine may be grouped under the following headings:

Medical: The medical profession will have an unparalleled opportunity for the practical application of research in diseases not ordinarily encountered in civilian practice, and in trauma of war. Problems in sanitation will be met and solved. There will be a vast field for the study of nutritional diseases. The newer methods for treatment of shock will be called into play. The preparation and storage of blood plasma, and its practical use under conditions of stress, will become routine practice. Because the war has limited the supply of many essential drugs, our needs will stimulate research workers to seek substitutes, which may well prove to be even more efficacious than the originals. There will be a vast opportunity for the practical application of Vitamins K and C in wound healing. It is estimated that their use will help shorten the period of disability, and thus permit the return of patients to normal activity at a much earlier time following operation or trauma. This is a factor of paramount importance in war, when man power is so essential. In civilian life it will tend to shorten hospitalization and time lost by reason of disability. This, in turn will reduce the cost of medical care, a factor which has always been a matter of concern to the medical profession, as well as to industry and employees.

On the other hand, the medical profession faces the probability that there will be little training in the various specialized branches of medicine during the war, because the urgent demand for medical men in the military forces will not permit time for special training. Further, there is a strong possibility that the flow of doctors may be checked because of the great need for man power, which will reduce the number of available students for medical training.

Prior to the last few years European post-graduate teaching attracted men from all over the world. At one time the advantages for study offered in these famous clinics excelled those to be found elsewhere. More recently, however, American physicians have felt that the opportunities for post-graduate study in this country equalled or, in fact, surpassed, those of Europe. Deterioration of European clinics began with World War One. Further disintegration may well ensue following this war, in addition to an entire loss of popularity. This should point the way to careful planning by our leading teachers and clinicians for post-graduate work of the highest caliber. The changes in medical education brought about by the program of accelerated teaching, which I have enumerated, and the probable discontinuance of residential training, will cause a number of physicians in the post-war period to take advantage of whatever facilities are then available to improve their training in certain fields. Many medical officers, as a result of their mil-

itary experiences, will be stimulated to enlarge the scope of their abilities. Thus there will be a golden opportunity for America to become the greatest center for post-graduate teaching that the world has ever known.

Economic: We must not overlook the probability of extension of all future medical and hospital care to veterans of this war, in millions of cases of non-service as well as service connected disabilities.

Social: The medical profession also faces an acute problem in the possibility of a great increase in relief rolls, by reason of unemployment during post-war readjustment; as well as an increase in the number of people who will come under the benefits of the Social Security programs.

It is thus obvious that this war will exert a great influence on the future of medicine. I believe that the private practice of medicine will continue, and that socialized medicine on a national scale will not prevail. There will, however, be many acute post-war problems by reason of extension of Social Security benefits and possible further extension of governmental care to veterans; and because of the return to dependency of many of those now engaged in the defense program.

At this time all our thought, all our energy and all our effort is directed to winning the war. With victory, however, the medical profession must face these problems and, through its state and national organizations should play an important role in leading and directing programs for medical care, and should see to it that in any legislation which has to do with medical care, the interests of the medical profession are fully protected.

Medicine is on a very good standard in the United States, when you realize that there is one doctor to 767 people, as compared to one doctor to 1,061 in England, and that really runs up to one doctor to 3,500 when you get to Czechoslovakia, and one doctor to 3,000 when you get even to such a well-organized though small country as Sweden. It is interesting to know that there were in 1927, 853,318 hospital beds; that in 1939 there were in this country 1,191,000 beds. —*Frank H. Lahey, M.D., Boston, in the Connecticut State Medical Journal.*

THE TREATMENT OF THYROTOXICOSIS

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The diagnosis of thyrotoxicosis is readily made in patients who have a relatively severe degree of hyperthyroidism. However, difficulty will be encountered in differentiating mild hyperthyroidism from numerous other diseases. A discussion on treatment of toxic goiter is, therefore, incomplete without emphasis on an accurate diagnosis. A disease which most completely simulates hyperthyroidism is neurocirculatory asthenia. In patients afflicted with this disease, nervousness, tremor, loss of weight, profuse sweating, tachycardia, sleeplessness, etc., are identical to that seen in toxic goiter. The differentiation can occasionally be made only on absence of enlargement of the thyroid. It must be remembered, however, that in about ten per cent of patients with toxic goiter the thyroid gland is not enlarged. Naturally, patients with neurocirculatory asthenia will not have exophthalmos or other eye signs. In general, it is a good rule to delay operative treatment in all these questionable cases until diagnosis of thyroid toxicity is proved. An ideal procedure in doubtful cases is to place the patient on Iodine therapy. With very few exceptions the patient with toxic goiter will be benefited and the patient with neurocirculatory asthenia will not. There are numerous other diseases, including pulmonary tuberculosis, leukemia, etc., which simulate hyperthyroidism.

PREOPERATIVE TREATMENT. — Of the various phases in the care of patients with toxic goiter, preoperative treatment is by far the most important, particularly if we include judgment as to time of operation in with preoperative consideration. It is universally agreed that toxic goiter is best treated by operation rather than by medical treatment, including x-ray therapy. Part of the reason for the almost universal agreement is dependent upon the sharp reduction in mortality rate during the past ten years, to a figure below one per cent in most clinics.

Administration of Iodine. — With very few exceptions, the administration of iodine (Lugol's solution) should be considered only as an agent

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in the preoperative preparation of the patient, and should not be used in routine therapy. Exceptions to this statement would, of course, be admitted to patients who refused operation. The doses of Lugol's solution is 5-10 minims three times a day. The author is of the opinion that larger doses are not more effective than this dose. Although in the average case of thyrotoxicosis the maximum benefit would be achieved near the twelfth to fourteenth day, yet there are many instances when the maximum benefit will not be achieved within three weeks or longer. It should, therefore, be emphasized that if the patient is not ready for operation after two weeks of iodine treatment, operation can be postponed until physical condition permits operation, even though many weeks may be consumed in this preoperative therapy and observation. Although patients do become iodine fast, this condition has been exaggerated and is not as dangerous as operating on a patient who is not yet operable.

Increased Caloric Intake. — One of the most common errors made in the treatment of toxic goiter is failure to appreciate fully the necessity of markedly increasing the food intake. As will be discussed later, a gain in weight is a very important prerequisite for operation. In the severely toxic patients, this gain in weight can be achieved only by a marked increase in the diet. The dietary intake in severely toxic patients will have to be increased to five thousand or six thousand calories per day. It is not sufficient to tell the patient to "eat a lot," since he thinks that the addition of a glass of milk two or three times between average sized meals constitutes a "lot." If patients are severely toxic, they should be hospitalized for this preoperative treatment, in which case the food may be administered accurately from the quantitative standpoint.

Sedation. — All patients with more than a trivial degree of hyperthyroidism will complain of sleeplessness. It is just as important (in fact, more important) that patients with toxic goiter obtain a full quota of sleep as any other individual. The administration of a mild sedative every day, such as phenobarbital in a dose of ½ gr. two or three times daily is strongly indicated. Morphine and codeine should not be given during this pre-operative preparation unless a crisis develops.

Control of Physical Activity. — Since patients with hyperthyroidism are burning up much more energy than the average individual, it is important that their physical activity be restricted. Naturally, patients with more than a mild toxicity should cease work. It should be emphasized that since restlessness and nervousness are constant symptoms of hyperthyroidism, these patients do poorly unless they have something to do. They should, therefore, be encouraged to occupy themselves with slight duties or pastimes which do not result in the expenditure of a significant amount of energy. They should be encouraged to take a nap for two or three hours each afternoon, or at least to lie down for complete rest. Patients with severe toxicity must be subjected to complete bed rest. The same may be said of patients with cardiac decompensation. The author is firmly convinced, however, that a patient with toxicity of a mild degree should not be subjected to bed rest since bed rest is apt to result in atrophy of muscle, bone, and so forth.

Elimination of Worry and Psychic Trauma. — Since patients with hyperthyroidism tend to be apprehensive, and worry about trivialities, it is essential that they be divorced from family troubles and other worries. For example, the mother should be separated from sick or unruly children, and should not be exposed to financial or family troubles unless absolutely necessary. Hospitalization will usually be sufficient to take care of this precaution. It is the duty of the physician to be sure that members of the family are not exciting the patient by unwise "loose" conversation.

PREREQUISITES FOR OPERATION. — Our inability to teach students just when a patient with severe hyperthyroidism was ready for operation drove us to an attempt to set up a group of prerequisites on as much of a mathematical basis as possible. Since adopting these prerequisites, we have not had a single fatality in our patients with hyperthyroidism.

Gain in Weight. — Of the several prerequisites to be mentioned, a gain of weight is perhaps the most important. In fact, I should like to make

the dogmatic statement that no patient with severe toxicity should be operated on without a gain in weight. Rarely indeed will it be impossible to produce a gain in weight if the caloric intake is pushed up to five thousand or six thousand calories per day. The average individual cannot begin to eat this quantity of food. However, since an increased appetite is one of the important manifestations of toxic goiter, rarely will it be difficult to have this type of patient eat the proper amount of food. About the only circumstances under which these patients will not eat their quota of five or six thousand calories is when they are nauseated by over medication or are approaching a crisis. The treatment in the presence of crisis is, of course, difficult, and will be discussed later.

The Resting Pulse should be Below 110. — Although the pulse with a toxic goiter varies considerably from hour to hour, it usually varies only with the stimulus of excitement and activity. It will, therefore, not be difficult to determine the resting pulse rate. We urge that the resting pulse rate should be under 110 if post-operative trouble is to be avoided. It is well known that the pulse rate of patients with toxic goiter have a very labile course insofar as a minor degree of excitement or physical activity will increase it sharply. If only slight activity produces a rise from 108 to 140, it is to be assumed that such patients are more toxic than appearances suggest. The author is of the opinion that the pulse rate is a very accurate index of the patient's toxicity. However, complicating factors such as cardiac lesions, physical strain, etc., must be borne in mind when using the pulse rate as an index of toxicity.

Administration of Iodine. — The patient with a significant degree of toxicity should be kept on Iodine therapy for at least two weeks before operation. Adherence to this rule will improve the mortality rate.

Basal Metabolic Rate below 50. — Although the author is fully aware of the fact that the basal metabolic rate is very frequently misleading, he is just as firmly convinced that in the vast majority of patients it is of definite assistance in determining the degree of toxicity. In general, patients with a basal metabolic rate over 50 at the time of operation will have a stormy post-operative course.

Improvement in Symptoms. — For two reasons it is important that there be an improvement in symptoms: (1) to verify the diagnosis and (2) to verify improvement in operability. In reality, improvement in symptoms is dependent upon the response to Iodine and the response to the other phases in pre-operative treatment.

By the use of the above prerequisites we are firmly convinced that we can increase the accuracy of the approximation of operability. We consider that patients who do not fall under the prerequisites just mentioned are poor operative risks and should not be subjected to a bilateral thyroidectomy. We realize that there are a few very capable surgeons doing goiter surgery who do not believe that division of the operation into two stages lessens the chance of fatality in the severely toxic patients. However, the author agrees with Lahey[1] and others who advise two-stage operation in patients whose operability is doubtful. If treatment for a few additional weeks beyond the usual time of expected maximum Iodine effect still is unsuccessful in having the patient fulfill the prerequisites mentioned, we resort to the removal of only one lobe. The second lobe is removed four to six weeks later (never under three weeks).

The patient's strength is a fairly good index of operability. Some surgeons go so far as to say that if a patient can walk as far as a block without excessive fatigue, he is operable. Although the author has never been able to establish any level of physical accomplishment as in itself being a prerequisite, he is, nevertheless, fully conscious of the fact that patients who are unable to walk several times about the room are poor operative risks and should not be operated on. In general, patients who can walk a block or two without having to stop for rest because of weakness, etc., will be operable.

ANESTHESIA. — The author prefers ethylene as the anesthetic of choice for thyroidectomy in patients with toxic goiter. It is important that proper premedication be given. A dose of 1.5 grs. of phenobarbital should be given the night before operation. Premedication consisting of morphine, gr. ¼ and scopolamine, gr. 1/150, should be given 60-90 minutes before operation. If toxicity is severe, the dose of mor-

phine may be increased. If a sedative such as phenobarbital is given early in the morning, the dose of morphine must be reduced.

The author agrees with Lahey and others that local anesthesia is not particularly desirable since it does not obliterate consciousness. Since patients with marked toxicity are naturally very apprehensive, they would surely tend to worry and fret during the excitement of operation unless premedication was ideal. The author is not convinced that the dose of premedication can be so effective as to obliterate this apprehension.

Nitrous oxide may be given by experts, but the amount of oxygen permissible is so small that anoxia may be present. Cyclopropane is a much more desirable agent since a relatively large amount of oxygen can be given with the gas, thereby eliminating anoxia. The chief difficulty with cyclopropane is that it produces a bradycardia and sometimes cardiac irregularity. The bradycardia interferes with the operators interpretation of the patient's operability.

Only rarely indeed is ether advisable as the anesthetic agent. Nevertheless, anesthetists should be well qualified and willing and able to change from one agent to another in case the anesthetic appears to be going poorly.

It is true that with general anesthesia there is apt to be more laryngeal spasm than with a local anesthetic. However, this spasm frequently can be controlled by a shift in the procedures of giving the anesthetic. If the spasm becomes stubborn, it may be necessary to pass an intratracheal tube. I wish to emphasize that patients with severe toxicity tolerate anoxia very poorly. If they should develop laryngeal spasm or any other obstruction of respiration, it must be corrected within a few minutes. If it is not corrected it will reflect in the patient's operability as will be noted by a sharp rise in pulse rate. Anesthetists should, therefore, be prepared to insert an intratracheal tube if stubborn laryngeal spasm develops.

PRECAUTIONS IN OPERATIVE TECHNIQUE. — Some of the more important precautions in operative technique consist of avoidance of injury to the recurrent laryngeal nerve, rapid control of hemorrhage, preservation of parathyroids, etc. By preserving the posterior capsule of each lobe, at least one or two parathyroids will practically always be preserved and the danger of injury to the recurrent nerve will be minimized. The author does not isolate the recurrent laryngeal nerve routinely, but recommends it in patients with recurrent hyperthyroidism and in patients who have numerous nodules extending backward and to the midline. In difficult cases the surgeon should move to the other side of the table when the second lobe is removed. Usually it will be necessary to cut the ribbon muscles transversely, but the surgeon should not hesitate to do so if exposure is poor. The important arterial trunks such as the superior and inferior thyroid vessels should be doubly ligated. The author prefers to use cotton rather than catgut to elminate the exudation of fluid which is apt to occur when catgut is used. I wish to emphasize that in general, carefulness during the operation should take precedence over speed. Careless rapid thyroidectomies will be associated with a high incidence of nerve injury, tetany, and post-operative hemorrhage. It should be emphasized, however, that when the patient's operability is doubtful, speed is very essential.

POST-OPERATIVE TREATMENT. — Many lives are saved by skillful and intelligent post-operative care. When the patient is put to bed after operation, the bandages should be inspected lest they be too tight. It must also be ascertained that the airway is open so that proper respiratory exchange can be secured. Lifting the backrest two or three inches will add to the patient's comfort and facilitate breathing and swallowing.

It is exceedingly important that patients with a severe degree of toxicity receive at least three thousand cubic centimeters of fluid the day of operation. It is our policy to give three thousand to an adult of average size irrespective of the amount he will take by mouth. He is allowed to drink water immediately after operation, but the quantity is usually so small as not to influence the amount given intravenously. The solution of choice is five per cent glucose. About one thousand cubic centimeters of this may contain saline. The amount of fluid given intravenously after the first day is dependent entirely upon the amount taken by mouth. I like to emphasize, however, that it is the surgeon's responsibility to see that the patient receives at

least three thousand cubic centimeters per day. The type of fluid given orally depends entirely upon the patient's likes and dislikes. It is usually unwise to give fluids to patients which they are not accustomed to drinking.

If the patient is quite toxic or if the pulse rate is relatively high, oxygen should be given. Placing the patient in an oxygen tent usually creates apprehension and fear, so, with few exceptions, we, therefore, resort to the administration through a tube inserted in the nasal pharynx through the nose.

The patient must be watched closely during the first twelve hours following thyroidectomy lest such complications as hemorrhage into the wound, respiratory obstruction, etc., develop. I wish to emphasize that a post-operative hemorrhage very rapidly fills up the neck so completely as to entirely suppress respiration. The neck should be opened immediately, using as good asepsis as possible, the clot evacuated, and the offending vessel secured. On many occasions, one of the first manifestations of post-operative hemorrhage will be difficulty in respiration. At first this is manifested by restlessness on the part of the patient who cannot find a comfortable position. Respiration will soon become noisy, associated with a stridor, followed soon by cyanosis. In general, delay in treatment of respiratory obstruction to the point where marked cyanosis develops, is inexcusable and dangerous. If hemorrhage is the cause of the obstruction, the neck will have to be opened. If it is due to injury of the recurrent laryngeal nerve, tracheotomy may be necessary. In either case, oxygen should be administered while the surgeon is making up his mind as to the necessity of radical treatment. Unfortunately, it is true that patients who develop significant respiratory stridor associated with cyanosis due to "nerve injury" within two or three hours following operation usually will require tracheotomy.

In our clinic, we routinely give 5cc of Lugol's solution by rectum in two hundred or three hundred cubic centimeters of water. Next day the patient is placed on ten minims of Lugol's solution three times a day. This therapy is maintained for two or three weeks until the symptoms of hyperthyroidism have disappeared.

Ample sedation is important in post-operative care. Heavy doses of morphine should be given to toxic patients who are restless. I wish to emphasize the necessity of sleep in such patients. In addition to morphine, phenobarbital, gr. 1/2 or more, may be given twice a day. However, morphine must not be given to the point of depressing respiration lest anoxia develop; particularly is this true if a barbiturate compound is being given.

Severely toxic patients require very few covers after operation. The average nurse is accustomed to placing one or two blankets on post-operative patients, and does not realize that post-operative thyroid patients do not require much cover. In warm weather it may be necessary to use ice bags, electric fans, etc.

TREATMENT OF CRISIS. — The incidence of crisis is much greater in summer than in winter because of the heat. Generally speaking, if the crisis develops post-operatively, it can usually be said that an error was made in the time of operation or in the extent of operation. Regardless of whether the crisis occurs post-operatively or pre-operatively, the treatment is about the same. If it develops in warm weather, the patient should be placed in an air-conditioned room. If he is sweating profusely, thereby making it necessary to give at least four thousand cubic centimeters of glucose in a twenty-four hour period, it is possible that glucose may be substituted in part by amino acids as popularized by Elman.[2] If the patient's temperature is elevated or is beginning to rise, ice bags and wet towels should be placed at various places on the body. If the temperature is higher than 102 or 103 degrees, an electric fan may be turned on him. The danger of "catching cold or pneumonia" is far less than the danger associated with crisis. Sodium iodide should be given intravenously in doses up to one gram once or twice a day. To obtain a higher caloric intake, it may be advisable to use ten per cent glucose instead of five and give it slowly. Oral intake may be resorted to, but usually is ineffective, since patients with crisis usually vomit. Sedatives are important; morphine and phenobarbital may be given together as indicated. It is exceedingly important that they not be given to the point of producing respiratory depression and anoxia. Administration of oxygen is likewise very important.

COMMENT

To a great extent the mortality rate is determined by the judgment and care exercised by the surgeon in choosing the time and extent of operation. The author agrees with Lockwood[3] who states that "There is scarcely any field of surgery in which the mortality reflects so truly the surgical judgment of the surgeon as goiter surgery. The operative skill and dexterity of the surgeon, while very important, bears comparatively little relation to the mortality." Although it is impossible to obtain a mortality rate of zero because of death from natural cause during the hospital stay, attempt should naturally be made to approach this figure as much as possible. In general, a mortality rate of greater than one per cent implies that there is a source of error somewhere in the phases of therapy and judgment as to operability.

Of six fatalities which we have encountered in a six year period (1936-1942), we discovered that one-half of these should have been preventable.

TABLE NO. 1
TYPES OF GOITER AND MORTALITY
(1936-1942)

Type	Operations	Deaths	Mortality	
Tox. Diffuse	348	3	0.86%	1.01%
Tox. Nodular	244	3	1.23%	
Non-Tox. Nod.	155	0	0%	
Total:	747	6	0.80%	

As shown in our above table, our mortality rate during the past six years is 0.8 per cent for toxic and non-toxic goiter excluding carcinoma. For the toxic group (see table 1) the mortality has been 1.01 per cent. As stated previously, we have not lost any patients since adopting the prerequisites for operation as described. We fully realize that each surgeon probably has his own method of determining operability and has definite prerequisites of his own. Regardless of the technique of operation used or the types of precautions adopted, we are all striving toward the same end, namely, maintenance of the lowest possible mortality rate with a maximum amount of benefit to the patient.

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CURRENT EXPERIENCES WITH E. HISTOLYTICA INFECTION IN CHICAGO

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Introduction: A number of studies of the incidence of infections with Endamoeba histolytica have been conducted in various parts of the country. The results obtained have been well tabulated by Craig and Faust.[1] On the basis of these surveys, they find an average incidence of 5% to 10%. However, the figures vary widely for different localities and for different groups in the same locality. The most complete survey for the Chicago area was made by Spector[2] during the post-epidemic period from 1933 to 1937. Among 4,478 normal persons representing various groups in the community, she obtained 205 or 4.6% positives and among 5,630 patients of the University of Chicago Clinics and the Lying-In Hospital she obtained 150 or 2.6% positives for the large cyst variety of E. histolytica. A much higher percentage of positives was obtained for the small cyst race which became very prevalent after the Chicago epidemic of the summer of 1933 and then gradually declined and disappeared. The incidence of amebiasis throughout the state of Illinois is not known, but it may be assumed to approximate that of the Chicago area.

Methods of Study: The present study comprises 2,691 persons examined during the period from May, 1938, to December, 1941. The individuals examined may be divided into two groups, the one consisting of 2,024 patients of the University of Chicago Clinics, and the other of 667 food handlers. In the great majority of instances, stool examination was carried out in the patients because of the presence of gastrointestinal symptoms. Examination of all food handlers, however, was routinely conducted and this group may, therefore, be considered more representative of the general local population. In most instances only one stool was submitted for examination. In 35% of the patients, however, two or more specimens were obtained per

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patient. Although provision is made for the re-examination of each food handler at intervals of six months, the heavy employment turnover reduced the number receiving two or more examinations to only 27% of the entire group.

Laboratory Diagnosis of Amebiasis: Detailed methods for the examination of feces for amebae are given in many textbooks and need no repetition here. In this study microscopic examinations were made of direct smears. During the first part of the study direct smears were supplemented by routine culture and hematoxylin stained smears, but as these techniques were quite time-consuming and in no instance increased the positive findings, they were discontinued as a routine and employed only as confirmatory tests. Culture alone cannot be depended upon because an occasional strain will fail to develop in culture. Six of the fifty strains reported here failed to develop in the excellent Cleveland and Collier medium. Concentration methods, especially the zinc sulphate flotation technique of Faust and coworkers[3] were employed only when large numbers of cysts were desired for class or experimental purposes. Such concentration methods are too laborious to be practical for routine use in the small laboratory. In our experience repeated careful microscopic examination of fecal smears suspended in salt and iodine solutions gives eminently satisfactory results.

Emphasis may be placed on the fact that stools containing barium, bismuth, oil, alkaline salts for ulcer management, etc., are not satisfactory for parasitic examination. As constipation is a common symptom in the carrier and as the practice of taking mineral oil is fairly widespread, clinicians should give attention to this possibility and should see that the oil is stopped several days prior to the collection of specimens for examination. Such a procedure will save both patient and parasitologist time and trouble. Saline purgatives may be given in obstinate constipation or where rapidity of diagnosis is required; otherwise, repeated examination of stools normally passed suffices.

The laboratory diagnosis of amebiasis is unfortunately not a simple matter. It requires adequate training and considerable experience. Since the majority of physicians must depend on laboratory or hospital technicians, every effort should be made to see that these persons are properly trained. In any case, the physician should assure himself that stool examination was performed by a qualified individual before placing complete reliance in the report. The physician in turn can assist the laboratory by giving proper instructions to the patient as to the collection of specimens.

Results: Infection with E. histolytica was detected in 50 or 1.8% of the total number of persons examined. Thirty-five infections or 1.7% occurred among the patients and 15 or 2.4% among the food handlers. If those food handlers examined previously are eliminated, the incidence among the new employees rises to 2.9%.

The value of submitting more than one stool for examination has been emphasized by many workers. Dobell found only one-third positives on first examination. In our series 43 or 86% were found positive on first examination, five on the second, one on the third, and one on the fifth. Furthermore, several patients in whom the first fecal specimen was positive showed one or more completely negative stools on subsequent pretherapeutic examinations. In such instances the stools were given exceptionally thorough examination. A diagnosis should not be accepted as negative in suspicious cases until at least six stool examinations have revealed no parasites, although in a large majority of cases, a single negative examination is sufficient for clinical purposes. Judgment is obviously required to determine when to continue a diligent search for parasites. It is not feasible to attempt every few months a careful examination of six or more stools of all food handlers or of all patients with abdominal distress, to say nothing of the general population! Once a positive diagnosis has been obtained, further pretherapeutic stool examination is, of course, unnecessary.

The value of proctoscopic examination in the diagnosis of amebic dysentery is controversial. From the standpoint of laboratory diagnosis we have found swabs taken directly from the typical lesions observed at proctoscopy to provide the best and quickest means of identification. In one of our patients showing typical ulceration of the rectum all stools were negative except one in which amebae were found not in the fecal mass itself but in the blobs of mucus accompanying it. Swabs obtained at proctoscopy on the other hand, were consistently positive. Dr. Kaplan-

Spector considered the blobs of mucus in the stool, particularly those tinged with blood, and swabs obtained from rectal lesions at proctoscopy to be the best material for the demonstration of amebae. Manson-Bahr[4] records 26 cases in which the "diagnosis was rendered certain from scrapings made from amebic ulcers of the bowel, whereas no fonfirmatory evidence had been forthcoming by simultaneous feces examination." Craig,[5] however, states that he has "never found it necessary to resort to this method in order to demonstrate the presence of the organisms."

The majority of persons harboring Endamoeba histolytica were males, 31 or 62%, as is in accordance with the known predisposition of the disease. The incidence in females was only 38% although the number of females examined, both as patients and as food handlers, was slightly greater constituting 55% of the total.

Among the 35 positive patients, 25 showed cysts or precystic forms or both and 10 showed trophozoites. Among the 15 positive food handlers 14 yielded cysts or precystic forms or both and only one showed trophozoites. Twenty-three of the 50 persons infected with E. histolytica also harbored one or more other parasites. In most instances these were non-pathogenic amebae or flagellates; in four there was coincident infection with Giardia lamblia and in one with Strongyloides stercoralis.

Although the patients examined represented for the most part persons with gastro-intestinal symptoms, it is of interest that the incidence of E. histolytica in them was lower than in the apparently normal food handlers. Kaplan-Spector, as previously noted, also found a much lower incidence in the clinic patients than in healthy individuals. In this connection Swalm[6] states that "the incidence of E. histolytica may be lower in a group of patients suffering from gastro-intestinal complaints than in a relatively healthy group." In a questionnaire which he sent to leading gastroenterologists throughout the country the reported incidence was only 0.5 to 2%.

Similarly fewer infestations with other parasites including both the pathogenic and non-pathogenic varieties were detected in our series of clinic patients than in the food handlers. Other intestinal parasites besides E. histolytica were found in only 191 or 9% of the patients as against 121 or 18% of the food handlers. Endamoeba coli was the most commonly found parasite and parasitization with two or more organisms was not uncommon.

Discussion: In spite of the massive evidence to the contrary, the tendency to regard amebiasis as a tropical disease persists. In most instances in this series symptoms had continued over a long period of time, and it was impossible to place exactly the geographic source of infection. This difficulty is further increased by the fact that persons may remain symptomless carriers for years only to develop symptoms on change of habit, lowering of resistance, or alteration in some other factor. The great majority of our patients had never been outside the United States and many had never left the Chicago area. Two patients with amebic dysentery definitely traced the onset of their infection to tropical countries, Mexico and Colombia respectively, and four patients with amebiasis seemed to have acquired their infections in India, Mexico, Guam, and Africa respectively. The remaining 44 infections were acquired in the United States, and more than a third were undoubtedly acquired in the north central states.

The occurrence of cysts of Endamoeba histolytica in apparently healthy individuals has caused much confusion in concepts of the disease. Explanations have ranged from the theory that E. histolytica itself was not pathogenic, the symptoms observed being attributed to simultaneous bacterial invasion, to the view that all persons infected showed some symptoms although these might be revealed only by close questioning or post-therapeutic improvement. More recently, however, the fact that there are asymptomatic carriers and that these probably constitute the greatest proportion of the infected has won general acceptance. As Craig states, however, there is probably no such thing as a healthy carrier, the carrier state representing a delicate balance between the invasive power of the organism and the defensive power of the host. Of the 15 infected food handlers described here, the majority appeared in excellent health; a few on questioning revealed miscellaneous complaints but in only one instance was improvement noted on termination of therapy. Of especial interest is one food handler who, in spite of passing a fluid stool containing considerable mucus and large numbers of motile E. histolytica, stated emphatically that she was in perfect health and never suffered from diarrhea.

Of the 25 patients harboring cystic or precystic forms, three failed to show suggestive symptoms. One was a contact of an infected patient, one had a coincident peptic ulcer making evaluation of symptoms difficult, and one complained only of pruritus ani, the pinworm being the expected parasitic agent. Among the remaining patients, abdominal pain, tenderness, or aching was the most common symptom, occurring in 17. This was located as frequently in the upper, especially right, as in the lower quadrants. In two it occurred substernally. Nervous symptoms such as sleeplessness, dizziness, irritability, or headache and flatus with or without belching and borborygmus were frequently observed, but may not have been related to the amebiasis. In fact, we are inclined to think that such symptoms, so common in functional disturbances of the digestive tract, are frequently encountered in carriers without being related to the parasites. Weakness or fatigue, and moderate temperature elevation, usually 100 to 101 degrees F. were each described by nine persons. Diarrhea was a complaint of six patients, constipation of five, while 11 experienced normal bowel movements. Other symptoms less frequently seen were weight loss and nausea noted by five persons, chills, vomiting and icterus observed in three, night-sweats in two and pruritus ani in two.

Among the ten patients showing motile forms in the stools, diarrhea was the most frequent complaint as expected. This occurred in nine patients. In the other the trophozoites were detected in mucus deposits accompanying the formed fecal mass. Gross blood in the stool was noted by eight patients, flatus by five, fatigue and weakness or pain by four, weight loss by only three, dizziness or nervousness, temperature elevation, and pruritus ani by two each, and nausea and anorexia by one.

Amebiasis has long been recognized as a chronic rather benign infection characterized by relapses and remissions. The present study emphasizes the chronicity of the infection when untreated or inadequately treated. Patients showing dysentery were able usually to place the onset of their infection more definitely than others. Among nine such cases, the duration ranged from two months to four years with an average of 21 months.

Several patients passing cysts gave definite histories of having had amebic dysentery at some time in the past, in one instance as long as 20 years previously. The question, of course, arises as to whether such cases represent relapses or reinfections. Where intermittent attacks are described over the period of time involved, however, it seems evident that relapse is the explanation.

Of some interest is the fact that of nine patients with amebic dysentery, only two sought treatment for the first time. Two had been recognized and treated in the past but had experienced frequent relapses. The remaining five had sought previous medical attention; two of these had even undergone periods of hospitalization without recognition of the true nature of their condition, although in some instances stool examination was stated to have been performed. These findings attest the lack of "consciousness" for E. histolytica infection and the inadequacy of laboratory diagnosis.

Treatment: Of the 25 persons passing cystic and precystic forms of Endamoeba histolytica, 17 received adequate therapy as judged by negative post-therapeutic stool examinations, six were not treated in the clinics and two, though treated, did not return for post-therapeutic check-up. Of the 17 who received adequate therapy as evidenced by negative stool examination, nine reported complete relief of symptoms; three described improvment; three stated they were in no wise benefitted. One of the last two received simultaneous treatment for peptic ulcer and hence the symptomatic effect of therapy was difficult to evaluate. In another the only complaint was pruritus ani which showed improvement on application of calamine lotion.

Of the ten persons passing trophozoites, nine were treated and all were either completely relieved of symptoms or were definitely improved.

Although the methods of treatment vary, the general trend has been to give emetine HCl injections for a period of ten days with simultaneous or subsequent oral administration of vioform, chiniofon or carbarsone. Chiniofon enemas are sometimes given also. For carriers, usually one ten-day course of chiniofon, carbarsone or vioform with repetition in a week or so is sufficient.

Of 37 patients and food handlers receiving treatment, 35 were available for one or more post-therapeutic stool examinations. In six cases only one post-therapeutic examination was obtained. The others received three to 13 examinations from one week to 16 months after treatment without detection of a single relapse. This finding would indicate that cure may be effected if treatment is vigorously applied. Caution must be exercised, however, in the interpretation of cure as recurrences have been observed by many workers despite negative post-therapeutic examinations. Wherever possible, the patient should return for reexamination at intervals of six months. Tonney, Hoeft, and Spector[7] noted recurrence in a food handler three years after treatment; this was interpreted as a relapse. But as the contacts of most cases are not checked and the individual returns at once to the same environment, reinfection may be involved more frequently than is supposed.

Of seven patients found to have persistent infection despite previous treatment for amebic dysentery, four had received emetine injections alone. This finding serves to reemphasize the inadequacy of emetine HCl in eradicating the infection. One had been treated with carbarsone, one with an arsenical he could not identify, and one with enterovioform. Administration of the latter compound was found to be followed almost immediately by relapse by Manson-Bahr.

Because of a somewhat atypical clinical picture, brief outlines of five cases are presented.

1. R.K., a 20 year old white female, entered the Chest Clinic complaining of a feeling of pressure beneath the sternum and of weight loss. On questioning no gastro-intestinal symptom except slight belching was elicited. The blood picture was normal. Stool examination revealed cysts of Endamoeba histolytica Treatment, consisting of amebicides and a high caloric diet, was followed by a prompt remission of symptoms and gain in weight.

2. B.P., a 46 year old white male, entered the Gastro-intestinal Clinic complaining of a sense of fullness across the epigastrium, belching and a loss of 7 to 8 pounds weight. Bowel movements were normal. Treatment with belladonna and phenobarbital did not effect improvement. One year later he returned complaining of pruritus ani, at which time the feces were examined and cysts of E. histolytica recovered. The patient failed to return for treatment.

3. R.G., a 50 year old white male, entered the Allergy Clinic complaining of a loss of 40 pounds in three months, rumbling and gurgling, periodic epigastric burning, anorexia, nervousness and constipation. A slight yellow pallor and slight anemia were noted. He gave a history of a similar attack seven years previously. Stool examination performed three years after his original entry, during which time symptoms had persisted, revealed abundant cysts of E. histolytica. This individual, from out-of-town, was engaged with his family in the manufacture of candy at home. He failed to return for treatment, but finally was induced to consult his local physician. The physician, who stated he had never treated a case of amebiasis, continued injections of emetine until toxic symptoms became manifest. Great difficulty was experienced in obtaining vioform in the local pharmacies.

4. J.S., a 37 year old male, entered the Medical Clinic complaining of exhaustion, weakness, chills and fever, joint and muscle pains, night sweats and dyspnea. There were no gastro-intestinal symptoms or signs. The highest temperature recorded was 102.6. A history of amebic dysentery four years previously was obtained. Cystic and precystic E. histolytica were identified in the stools. Treatment with emetine HCl and vioform resulted in prompt and complete remission of symptoms.

5. G.E., a 34 year old male, entered the hospital on the pneumonia service, complaining of right upper quadrant pain, chills and fever with an afternoon rise up to 102 degrees, weakness and loss of 25 pounds weight. An icteric tinge of the skin was noted and the patient described occasional dark urine and light stools. Cystic and precystic forms of E. histolytica were identified in the stool. Prompt and complete remission of symptoms followed therapy. A diagnosis of amebic hepatic abscess seems justifiable in this case, and probably also in the previous one, although there were no definite localizing signs except the slight icterus in Case 5.

SUMMARY

An incidence of infection with Endamoeba histolytica of 1.8% was found among 2,691 persons comprising 2,024 patients of the University of Chicago Clinics and 667 food handlers. The incidence among the patients was lower, 1.7%, than that among the food handlers, 2.4%.

Attention is called to certain epidemiological and clinical observations.

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POLLUTIONS — A PSYCHIC AND SOMATIC STUDY

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Involuntary discharges of semen occurring during sleep, accompanied with erotic dreams and erection, may recur so frequently as to make the affected person physically and mentally ill. The usual treatment consists in medicating the seminal vesicles, the prostate gland, the genital canal and the ejaculatory ducts. These are the supposed underlying seats of pathology. This sort of interference has been notoriously inadequate. Only a paltry number of successes have been claimed for this system of combatting a veritable nuisance. We ought to know more about nocturnal emissions and to have at our disposal ways and means of curtailing needless seminal losses. I propose to show that there is a pressing need for radically changing our attitude toward the problem of pathological emissions and to include a plan whereby the sorely distressed may find relief.

Urologists are divided into several schools of opinion as to the best way to handle the patient who states that he is being "knocked out" by his seminal losses. One group — and the bulk of urologists are in this category — believe that the cause is an inflammation of the sexual parts. Accordingly, they resort to local treatment. Another group adhere to this scheme, but also include sedation of the nervous system. The third school regard nightly emissions mainly as a psychic ailment, though recognizing that local and constitutional factors may occasionally be involved, either directly or indirectly. Unquestionably, the best, the quickest and the most lasting improvement follows from adhering to the view that unusual sexual mechanisms are due to a disturbance of the mind as well as the body.

An error in medical logic is responsible for much of the confusion which exists in medical circles concerning the etiology of pollutions. Prior to the time when the practice of medicine was established on a firm foundation — and this date, by the way, was not so very long ago — physicians treated symptoms rather than the disease itself. If a man complained of a cough, the physician would prescribe a cough remedy. Whether the cough was the end effect of bronchial irritation, cardiac weakness, or caused by inhaling irritating fumes, was not seriously considered. If the patient got well, all credit went to the ingredients of the prescription. Usually, patients would tell their friends about the virtures of their prescription and would even advise them to take the same medicine. People would swallow any highly praised preparation without ever stopping to inquire whether it was indicated in their case or not.

As time went on and physicians began to view illness in a scientific way, they discovered that there are many causes for a cough. Doctors listened carefully to the patient's breath sounds, they examined the sputum, they took X-ray pictures of the chest, and made use of every known device to discover what elements were inducing the cough. Thus we see that physicians no longer were content to treat symptoms but searched for causes. To secure permanent improvement it was essential also to treat the disease and the patient.

This wave of progressiveness was very catching. The genito-urinary specialists ceased trying to stop night losses by numbing the patient's sexual sensibilities. They wanted to put the proposition of continued seminal losses on a scientific basis. They said that pathologic seminal emissions were an expression of diseased or inflammed seed sacs. They concluded, therefore, that no improvement could ensue unless the structures which were in a state of agitation could be quieted down. Their argument was that pollutions were a symptom and that it was no more sensible to treat a sexual symptom than it was to manage a cough without getting down to the root of the matter. Every disease had a cause, said the pathologists, and it was senseless to treat pollutions unless one got at the basic trouble — some irritation in the seminal reservoirs.

Attempts were now made to assist, in a scientific way, the man who stated that his very vitality was being drained via night losses. Sexual tenseness was lowered by the administra-

tion of nervous system sedatives. Strong caustic solutions — and even the caustic substance in a pure state — were injected or applied to the veru montanum in the hope of fortifying the valvular action of the ejaculatory ducts. All this was done on the theory that the seminal ducts had to be tightened. Thus the seminal seepage would be stopped. But it wasn't. Curiously enough, interference, or worse yet, meddling of this sort only served to heighten sexual ardor. The more vigorous the treatment, the more troublesome were the pollutions.

What mistake were physicians making? Why was this sort of approach a total failure? Had not the so-called authorities, who had given special study to such matters, reasoned correctly when they stated that frequent ejaculations of semen during sleep were only a symptom and that no return to normalcy could be brought about unless the vesicles were made to behave? Yes, an erroneous deduction had been made! While it was true that pollutions were rightly regarded as a symptom; and while it was also a fact that the semen was ejaculated during sleep because the seminal vesicles contracted, it did not follow that the vesicles of necessity were diseased or inflamed. The propensity for the vesicles to empty was generated in a great number of instances by other factors. Few physicians then knew, what many more know today, that there is a higher power than the local sexual regulators which can start or stop seminal emissions; and that all mighty controller is in the mind. It has taken researchers a long time to learn that mental excitation can, and does, make the sexual apparatus work during the time when the body is almost at complete repose.

It is easy to see why our medical forbears accepted false dicta as the truth. They regarded abnormal seminal emissions as a symptom of seminal vesicle disease. It was all so perfectly obvious it could not be otherwise. So they thought. They said that seminal discharge was a consequence of a state of irritation in the seed sacs, just as the internal medicine experts had demonstrated that a cough was initiated by some irritant in the lung. As we now know, the two disorders are not comparable. In respiratory disease, we usually have the simple irritant and its direct effect on the lung. In the case of pollutions, we have to contend with a third factor — the brain. Physicians in the old days did not pause to consider that a sexual thought buried in the mind could be responsible for pollutions.

Only by understanding what goes on in the thinking apparatus, and only by knowing how to extirpate disturbing and provocative thoughts which incite unconscious sexual arousement and ejaculation, can the annoyance of involuntary emissions be overcome.

Since the turn of this century physicians who treat sexual disorders began to realize in all seriousness that the therapeutics of nocturnal pollutions was in a muddled state. Many prudish general practitioners considered it somewhat undignified to prescribe for any form of sexual weakness. Even the sexual disease experts were reluctant to discuss the relationship of sexual psychology to sexual pathology.

During the past two decades there has been a marked change in the attitude of the laity as well as the profession toward the pollution problem. Intelligent folks realized that an improperly functioning sexual gland could be corrected just as well as a disordered stomach.

Before analyzing the situations which are related to unusual night losses, it is well to say a few words about normal nocturnal emissions. The frequency of seminal vesicle expression varies with the age and sexual status of each individual. Adolescents come to know sexual maturity in a frightening episode. The virile fluid — somewhat akin to the way geysers spout through Mother Earth — breaks past its barriers, and informs the lad that he is now a man. Young vigorous males who are easily thrilled to intensity by the mere companionship of a fair sex member are bothered by pollutions not infrequently. Engaged young men may experience a night loss once or twice a week during the hectic love making period. A considerable difference in the sexual activity of various men is noted. Of course exuberant males full of nascent energy will exhibit physiological depletion much more often than the young man whom nature endowed with a sparing amount of virile sparks. We find that in middle-aged bachelors there are considerable lapses between their periodic pollutions, for they are less inclined to envisage romantic episodes. Allowing for individual variation, it can be said that pollutions occurring once a week, or once a fortnight, are compatible with a stable

nervous and sexual system. Of course, if auto-erotism or coitus intervenes, it serves as a sexual vent, and accordingly the number of pollutions will decrease or they may not even occur at all.

The consensus of medical men has it that pollutions are a physiological process and serve as a body safeguard. They are normal and healthful, provided the individual is buoyant and refreshed after their occurrence. If the nocturnal emission serves to relieve sexual tension, it has fulfilled a useful purpose and is regarded as nature's way of disposing of excessive sexual secretion.

How, then, are we to explain the nightly seminal pollution occurring in married men enjoying normal sexual relationship? If the pollution is a physiological safety valve, what causes them to happen night after night until they make a wreck of a man? If the pollution is a mechanical evacuation, why do they recur with such unnecessary frequency?

Granted that the problem seems very baffling; it is none the less solvable. We can best accomplish our task by dividing the subject into its proper phases by classifying pollutions into four groups: 1) mechanical pollutions, 2) substitute pollutions, 3) psychic pollutions, and 4) pathological pollutions.

Mechanical or physiological pollutions are the effects of continence. They occur in young males, or in mature men, who cannot respond to the plea of nature. Substitute pollutions are the sort which take place if the sexual mate is not available, and the body must exercise its prerogative by sweeping out the virile substance in a safe and sane manner. Psychic pollutions are the effects of pleasing mental stimuli. Pathological pollutions ensue when the sexual mechanism is set into riotous motion. They may be due to psychic processes, undue fatigue, worry, local disease, systemic disease, disorders of the nervous system or other factors.

Abnormal pollutions either in the married or single man usually are the effects of psychic stimuli which lie concealed in the unconscious strata of the mind and flare into activity when a chain of unusual circumstances arises. Anxiety concerning the future of mankind, or a state of terror which is traceable to the impressions left by reading about the atrocities of war, can serve to weaken the inhibitors which guard the well being of the mind. Why should one who is sad have his unconscious thoughts turn to sexual reverie? It might be due in part to the toxic action of fatigue products, or it may be that the mind wants a pleasant sort of antidote for the usual sordidness it copes with daily. Many years ago, Mosso, the Italian physiologist, pointed out that utter exhaustion could induce unusual degrees of sexual appetitie. During mental confusion psychic intoxicants can operate in like fashion.

Imaginary coitus created in a dream which is sufficiently vivid to develop a vigorous erection and permit the subject to semi-consciously enjoy voluptuous sensations, climaxed by orgastic sensation and orgasm, is a form of mental auto-erotism — a non-guilty, non-sinful type of self-gratification. A man cannot be held responsible or censured for the wet-dream, since it can be claimed that he was oblivious to the entire act until he awakened and discovered what had transpired.

To help the man who ardently pleads for relief from nightly seminal losses, the physician must learn what goes on in the troubled mind. This is accomplished by obtaining the history of the person's sexual life. A record of this kind cannot be got as one wheedles out an account of the usual diseases and ailments of infant and adult life, which the average human being discloses with some degree of pride. A survey of a personality is made by establishing an emotional rapport between the sick man and the one whose function it is to administer aid.

If one would understand the modus operandi of pollutions, he has to be cognizant of the weaker links in the subject's sexual development. This is a laborious, painstaking, time-consuming task. One must comprehend the degree and extent to which psychic factors have influenced traits of character. In a word, we must learn how the patient's life has been colored by emotion and to what extent the emotional component has been repressed.

The first requirement in managing a case of pathological nocturnal emissions is to inform the patient in all sincerity and honesty that he is not undergoing a process of sexual debility. To this assertion the subject will counter by asking what, then, is the cause of his languor, loss of appetite, lack of zest for living, headache, pain in the back, inability to carry on his business, smarting and burning sensation in the eyes,

pains in the penis and testicles, as well as a thousand and one other complaints. My reply is that many of these disturbing conditions are the effects of apprehensiveness concerning the needless loss of semen.

One of the first things we learn about men who are weighed down by wet-dreams is that they believe their health is undermined in the same way that excessive intercourse works its damage. This idea originated many centuries ago when professional alarmists — because of their ignorance — tried to lay all nervous disorders to the repeated shocks which the brain and spinal cord suffered from loss of semen during the sexual orgasm. Thus were ordinary folk baffled by astute befuddlers who profited neatly thereby. The red herring of "excessive coitus" is still pulled out of the bag whenever it is necessary for the physician to have an alibi for medical incompetency. The time is rapidly drawing to a close when this shallow explanation is acceptable.

A short lecture on the physiology of the nervous system serves to inform the sufferer that semen losses do not damage the cells or ganglia of the nervous system. It is astonishing to learn how little most men know about their own body. They allow such vivid expressions as "muscle wastage," "brain decay," "progressive atrophy," "lack of secondary sexual characteristics," "wasting degeneration," and "fatty degeneration of the spinal cord" to occupy a foremost seat in their mind. Alas! And this is much more disturbing — they associate these phrases with the ill effects of over-exercise in sexual activity.

A pertinent dissertation on sleep is next on the agenda of re-education. The man who terms himself the victim of uncontrolled emissions must be made to realize that the sleeping period is not a state of narcosis. When the watchmen of the body are given a rest, the mind can play in an abandoned manner. Therefore, if nighttime or the sleeping period is the only interval in which the individual can enjoy unrestricted psychic play, then it is the physician's function to train the patient to alter his work and recreational program so that he will not try to do all his pleasure thinking when asleep.

Diet is of importance in some cases. I have succeeded in putting a quick end to a pollution habit which had extended over a nine month period by altering the program of the midnight feast. This person indulged freely in eating sausage, cheese, bread, pickles, and other delicacies just before retiring. He hated to give up his bedtime snack, but when he took notice of the absence of nocturnal emissions on the nights he abstained from eating, he readily acquiesced.

A revamping of the subject's pattern of life is indicated in most instances. There comes to my mind a case of a married man who dearly loved his wife and three children. On the surface he had not a worry in the world. But he was a man who was wrapped up in organization work. As chairman of numerous committees and delegate to conventions, his physical and mental reserve was sorely drained. True, he was proud of the honors which were heaped on him, but he was not aware that he was paying a terrific price for them. I recommended immediate resignation from several positions, and the effect was as startling to the patient's family as it was to himself. The moral was that the patient was cracking under a load and the pollution was the consequence of recourse to a type of mental relaxation which he was not getting in his sexual life. Though he was enjoying sexual relations with his wife, he was deprived of any true psychic relief because he indulged at the end of a busy day when he was mentally confused. During sleep, when more perfect peace of mind and body was to be had, the sexual mechanism could function in an unconstrained manner.

A splendid illustration of what can be accomplished without the patient being penalized by pain is seen in the case of a young man who reported continued pollution in spite of the treatment received from several urologists. How could he expect to obtain any improvement when all other urologists handled such cases alike? I informed him that no local treatment would be instituted. This seemed like a new deal and he accepted the plan. A detailed investigative study disclosed several pertinent clues. One very obvious restriction in his amative life was his apron string attachment to his mother. This was so firmly bound that any opportunity for marriage seemed like a hopeless proposition. By adopting a plan of action

which provided more hours of escape, the young man freed himself of bondage and from nightly seminal losses as well.

No longer do physicians look upon functional sexual ailments as due to pure psychic or organic causes but as a combined proposition. This relationship is best termed the "psychic-somatic factor." Just as we have spastic action of the colon, so, too, there exists a nervous or spastic bladder, a spastic prostrate gland and spastic action of the seminal vesicles. It is often very difficult to find all the factors which ignite the sexual system, but these can be detected by careful observation and by tracking down the mysterious and disturbing emotions. This is the best mode for effecting quick improvement in all instances of pollutions. Seminal losses can be stemmed by studying the individual's mental processes and directing the dynamic forces of the body along proper channels.

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THROMBOSIS OF INTRACRANIAL VENOUS SINUSES IN MIDDLE EAR SUPPURATION

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CHICAGO

The otological literature contains a profusion of reports on the subject of venous sinus thrombosis complicating middle ear suppuration and many exhaustive reviews of the literature on the subject have been made.

The present report will be directed chiefly to two phases of this problem which have come into prominence in recent years, and their influence on the management of this complication, namely, the association of sinus thrombosis with petrous pyramid suppuration, and the relative place of chemotherapy and surgery in the treatment.

The report is based upon twenty-five consecutive cases which are grouped in Table 1.

Group 1 includes all cases in which an obliterating thrombus was seen and removed at operation or was seen at necropsy. The extent of the thrombosis varied from a simple block in the jugular bulb to a thrombosis from the vein in the neck up to the superior longitudinal sinus. The six fatalities occurred in this group and will be discussed later.

Groups 2 and 3 include cases in which although an obliterating thrombus was not demonstrated, a direct invasion of the blood stream from the focus of necrosis and suppuration overlying a venous sinus undoubtedly existed. With one exception all were cases of prolonged suppuration in the middle ear cell system, with the development of signs of sepsis and a positive blood culture or metastatic suppurative foci from two to four weeks after the onset of the ear suppuration. In all but one, the focus of suppuration was drained or eradicated at operation, followed by rapid recovery of the disease in the ear, although the metastatic suppurations required much longer periods for recovery. In one case, to be described later recovery followed heavy dosage of sulfanilamide, without mastoid surgery.

The problem confronting the otologist in cases of invasion of the venous sinuses by suppuration in the middle ear cell system is first, to prevent extension either by way of the blood stream (metastatic and embolic spread) or by direct contiguity within the venous system to more important regions, and second, adequate drainage of the focus of suppuration within the bone. The focus may be located in any part of the middle ear cell system, since practically all pneumatized areas lie relatively close to some one of the large venous sinuses. Of the 23 cases occurring in acute suppuration, five were secondary to a suppurating focus in the petrous apex. This proportion corresponds closely to the frequency with which pneumatization of the apex occurs which is slightly over twenty per cent.

While an obliterating thrombus was not seen in groups 2 and 3 the condition which existed must be considered as an earlier stage of extension to the venous sinuses. In group 3 a peri-

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sinus abscess with a localized phlebitis was seen in two cases and in a third a suppurating focus in the apex drained, with prompt recovery. The cases in group 2 probably had an obliterating thrombus in the bulb but in both groups 2 and 3 the condition differs from group 1 only in the matter of degree. No case of perisinus abscess is included unless accompanied by definite blood stream invasion.

Table I

		Queckenstedt (Tobey Ayer Test)							
		No. of Cases	Recoveries	Positive	Negative	Not done	Unsatisfactory Jugular Ligated	Pos. Blood Culture	Metastatic Spread
25 cases	23 complicating acute suppuration 2 complicating chronic suppuration								
Group 1. Complete thrombosis, proven at operation or necropsy		18	12	8		9	1 12	8	4
Group 2. Positive Queckenstedt (Tobey-Ayer) test, sigmoid and transverse sinuses clear, but with either positive blood culture or metastatic spread		3	3	3	0	0	0 3	2	1
Group 3. Normal Queckenstedt test, but positive blood culture or metastatic spread or both.		4	4	0	4		0	4	2
Total		25 cases							
Mortality		24%							
Total of Operated Cases		17.4%							
Metastatic or embolic spread to joints or long bones 6 cases, lungs and pleura 2 cases, microscopic brain abscess 1 case Total		28%							
Bacteriology:									
Hem. streptococcus —		21 cases							
Pneumococcus Type IV		1 case							
Anaerobic streptococcus		1 case							
Unknown		2 cases							

QUECKENSTEDT OR TOBEY AYER TEST

Despite the various possibilities which must be taken into consideration this test is extremely valuable as a diagnostic aid. While the positive test is not an infallible sign of a block in the venous channel on that side, the test was positive in every case where it was carried out in the presence of an obliterating thrombus occupying the jugular bulb or vein. A complete thrombosis in the lateral sinus or sigmoid, above the bulb may only give a partially positive result, since the circulation through the cavernous and inferior petrosal sinuses is still intact. Errors in technic or abnormal venous circulation may give an erroneous result, particularly the former, and must always be considered. A positive result is not proof that a block is present but it is strong evidence.

The normal (negative) response to the test is equally valuable in the management of complications, inasmuch as it indicates that circulation probably exists in the lateral sinus, bulb and jugular vein. This does not preclude the existence of phlebitis and localized thrombosis in either of the petrosals, or in the cavernous sinus, and in such cases blood stream invasion may persist for several days before a thrombus extends down the inferior petrosal into the jugular bulb and vein, or from the superior petrosal into the sigmoid. Such a sequence of events was clearly demonstrated in three cases of petrous apex suppuration.

A partial block may indicate a mural thrombus, or as in Case VI of this report it may occur with a complete thrombosis of the sigmoid, but a patent inferior petrosal sinus, jugular bulb and vein.

LIGATION OF JUGULAR

The procedure followed in all cases with a complete thrombosis has been to ligate the jugular vein before clearing out the thrombus. The ligation of the vein below the thrombus with resection of the thrombosed part does not interfere with circulation since that is already interrupted and it provides some protection against embolism. In two cases the lower end of the thrombus was not reached, and although hem. strep. were cultured from the proximal end and chemotherapy was not yet available prompt recovery followed without suppuration in the neck.

In two other instances the thrombus could not be completely removed because of extension beyond the torcula, but complete recovery followed in both cases, also before chemotherapy. The recovery in such cases must be regarded as fortunate however because two of the fatalities in the group occurred as a result of extension into the superior longitudinal sinus.

In the presence of a normal Queckenstedt test ligation of the jugular vein was decided against in three cases. All of these recovered (group 3) although metastatic foci of suppuration were present in two. In this group of cases the most essential requirement from a surgical standpoint is the drainage of the focus of suppuration in the bone. In the more advanced

type, with complete thrombosis, the surgical procedure on the sinus and vein is the first essential, to prevent extension. However, failure to drain the focus in the bone, for instance in an unrecognized petrous apex infection, may still result in a meningitis, although the invasion of the sinus has been arrested.

SINUS THROMBOSIS FROM PETROUS APEX SUPPURATION

Five cases out of twenty-four were secondary to petrous apex suppuration. A brief account of each case will be given. The one case in which the focus of suppuration in the pyramid was not recognized terminated in a fatal meningitis.

Case 1. J. L. (1929) Male, age 66. Bilateral acute middle ear suppuration four weeks duration. Bilateral mastoidectomy. Persistent temporo-parietal and frontal headache on the right side. One week later lateral sinus thrombosis, right. Mastoid revision. Jugular ligation and removal of thrombus. Then one week later retropharyngeal abscess right which was drained. Persistent headache. Death from meningitis 7 weeks after onset.

Comment. The unrecognized petrous pyramid suppuration led to sinus thrombosis, and an abscess in the retropharyngeal region both of which the patient survived, only to develop a diffuse meningitis from the undrained focus in the pyramid.

Case 2. J. S. Child, age 8. Acute middle ear suppuration. Hem. strep. After about two weeks a swelling and abscess in the neck occurred. Drained. Persistent fistula draining pus. Mastoidectomy. Sepsis and sinus thrombosis developed. Jugular ligation and removal of thrombus. Persistent draining fistula in the neck. Nearly one year later meningeal signs developed and a large focus of necrosis in the apex was demonstrated and drained. Symptomatic recovery but persistent purulent drainage from the fistula and evidence of chronic osteomyelitis two years after onset of disease.

Comment. The lateral sinus thrombosis was adequately treated, but the focus of suppuration in the apex had inadequate drainage through the fistula, causing later complications.

Case III. K. Mc M. Male, age 6 (1937) Acute middle ear suppuration 3 weeks. Septic temperature. Hem. strep. Mastoidectomy. Sigmoid sinus widely exposed and normal. Persistent sepsis. Clouded petrous apex on X-ray. Positive blood culture. Apex operation by way of middle ear. Sigmoid sinus still appeared normal. Queckenstedt test doubtful. Sepsis persisted. Three days later revision was done. Sigmoid sinus obviously thrombosed. Thrombosed jugular vein resected. Lower end of clot not reached. Thrombus removed from sigmoid. Recovery. Sulfanilamide used in moderate dosage.

Comment. Sepsis undoubtedly originated from the apex suppuration and thrombosis extended to the bulb and down the jugular vein. The thrombus in the sigmoid developed in the late stages of the sepsis, probably retrograde extension from the bulb.

Case IV. J. L. Female, age 5. Acute middle ear suppuration left. Hem. strep. 3 weeks. Septic temperature. Pneumatized apexes, clouded on left. Mastoidectomy. No improvement. 6th nerve palsy. Positive blood culture. Apex operation via middle ear. Large abscess drained. Queckenstedt test positive on left. Sigmoid sinus normal. Sepsis persisted. Three days later the jugular was ligated above the facial vein. No thrombus, but circulation appeared to be absent. Sigmoid sinus still appeared normal, and blood was freely withdrawn with a needle. Uninterrupted recovery. Sulfanilamide used in moderate dosage. X-rays shown in previous publication.[1] (Figure 15 b)

Comment. Blood stream invasion occurred from the abscess in the apex. The inferior petrosal sinus and jugular bulb were probably thrombosed, but since the thrombus was not seen the case is classed in group 2 in Table 1. The drainage of the abscess in the apex was the essential part of the treatment. The jugular ligation was of questionable value in this case.

Case V. J. K., male, age 6. (1939) Acute middle ear suppuration right, 4 weeks. Sulfanilamide used at home. Admitted with early meningeal signs, and nystagmus in direction of gaze, more marked to the left. Queckenstedt test positive on left. Petrous apexes pneumatized, clouded on right. Mastoidectomy. No cell breakdown. No tracts leading towards perilabyrinthine areas. Dura and sigmoid sinus exposed widely and were normal in appearance.

During the following week sepsis developed and blood culture became strongly positive. Mastoid revision. Sigmoid sinus normal. Apex operation via middle ear. Queckenstedt test still normal on the right. Following apex operation there was an uninterrupted recovery. Chemotherapy was not used. X-rays shown in previous publication.[1] (Figure 14 A)

Comment. Invasion of the blood stream originated from the suppuration in the apex. The obvious explanation for the prompt response to surgical drainage is that the inflammatory process in the wall of the petrosal sinus was still in a reversible stage at the time drainage was instituted. It is comparable to other cases in Group 3, Table I in which metastatic foci had already developed from an abscess around the

sigmoid sinus, but which also healed without interruption of the circulation. Surgical intervention while the process involving the wall of the sinus is still reversible prevents the necessity of surgery on the vein and sinus.

The incidence of invasion of venous sinuses from suppuration in the apex in this series was about 20 per cent which approximates closely the percentage in which the apex is pneumatized in bones over three years of age.

Failure to recognize and drain the focus of suppuration in the pyramid in such cases is likely to be followed by further intracranial complication in spite of the arrest of the process in the venous sinuses by surgery. Accumulating experience also shows that when the focus of suppuration was already developed, either in the bone or in the venous channels, chemotherapy serves the purpose of keeping the process localized but cannot be depended upon to sterilize the focus and prevent later complications. Surgical drainage is still the most essential part of the treatment.

MORTALITY

Including two unoperated cases, seen in extremis the mortality was 24 per cent. A necropsy was performed on five, while the cause of death in the sixth was evident from the clinical picture and operative findings. The cause of death in each case was as follows:

1. Meningitis complicating an unrecognized petrous pyramid suppuration (1929). See Case No. 1 previously described.

2. Superior longitudinal sinus thrombosis and multiple joint suppurations. Child of 4 years. (1935) This case was seen in extremis and had no surgery on the mastoid or lateral sinus.

3. Superior longitudinal sinus thrombosis (1940). At the mastoid operation a large extradural abscess was found in the posterior fossa with the lateral sinus in the sigmoid and transverse portions completely thrombosed. Extension to the longitudinal sinus already present. Sulfanilamide therapy prolonged life for weeks but failed to cure. Irreparable damage had probably occurred before the therapy was instituted since a spastic state already existed. See Chart No. 1.

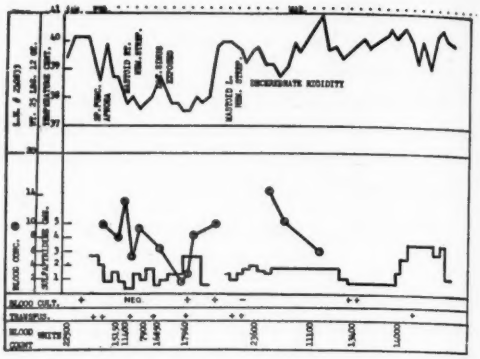

Chart No. 1. Suppurative otitis media, extradural abscess in the posterior fossa, thrombosis of the lateral sinus and superior sagittal sinus terminating fatally in a child of one year. Extensive thrombosis present before treatment was begun.

4. Meningitis, pneumococcus type IV. Infant of 7 months (1937) Advanced diffuse meningitis and jugular bulb thrombosis existed at time of admission. Jugular ligation was done but the sigmoid sinus was free from thrombus. Sulfanilamide therapy unsuccessful. Death from meningitis.

5. Abscess in the cerebello-pontine angle — child of 4 years. The disease in the venous sinuses was controlled by jugular ligation and removal of thrombus from the lateral sinus, but an abscess localized in the cerebello-pontine angle went unrecognized and resisted chemotherapy. Child did not have diffuse meningitis. He developed an ipsilateral hemiplegia 24 hours before death. See Chart No. 2.

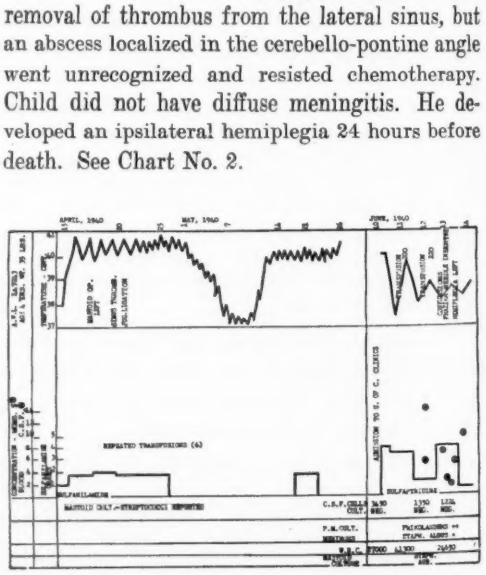

Chart No. 2. Suppurative otitis media with lateral sinus thrombosis and localized abscess in the cerebello-pontine angle. Sinus thrombosis successfully treated but the cisternal abscess proved fatal.

6. Bilateral embolic extension to lungs and bilateral massive empyema was the direct cause of death in a 26 year old male adult with cholesteatoma, lateral sinus thrombosis, and temporal-lobe abscess. Multiple microscopic brain abscesses were also present. Anaerobic streptococcus on culture.

A review of these fatal cases serves to emphasize three essential points in management of sinus thrombosis.

1. The suppurating thrombus in the sinus must be drained or eradicated before such extensions occur as longitudinal sinus thrombosis, localized intracranial abscess, basilar meningitis, massive embolism to the lungs or metastases to other vital areas.

2. The suppurating focus in the bone must be adequately drained or further intracranial complication is likely to develop even although the sinus thrombosis heals. The middle ear cell system extends into the petrous apex in about one case in five. Suppuration in the apex accounts for about 20 per cent of sinus thrombosis and in such cases the apex requires surgical drainage.

3. After a suppurative focus has been established in the bone or within the venous sinuses around the bone, chemotherapy should be considered as the first step in the treatment, but can not be relied upon to effect a cure or to hold the infection in check for more than a limited period.

RELATIVE PLACE OF CHEMOTHERAPY AND SURGERY

The following group of cases have been selected to illustrate the relative place of chemotherapy and surgery in cases where a suppurative focus in the bone is already established and invasion of the blood stream has occurred.

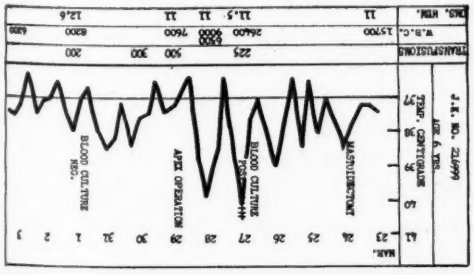

Chart No. 3. Suppurative otitis media with extension to the petrous apex. Invasion of the blood stream, probably the inferior petrosal sinus, with prompt recovery following simple drainage of the petrous apex.

1. Chart No. 3 shows the clinical course in case V. Surgical drainage of the suppurating focus in the apex was followed by a dramatic disappearance of the blood stream infection and uninterrupted recovery. This type of clinical result following adequate surgical procedures both before and after a suppurating thrombus was present has been common occurrence before the advent of chemotherapy. The essential features were that the surgery be adequate and be carried out before hopeless extensions of the infection had occurred.

2. Chart No. 2 shows the clinical course of the case which terminated fatally as a result of an undiscovered abscess in the cerebellopontine angle.

In this case the surgical procedure on the venous channels gave a satisfactory result, but the abscess beneath the tentorium which was already present in all probability, resisted chemotherapy. The correct diagnosis was only apparent at necropsy. This case illustrates one type of serious complication which may produce a fatal result regardless of arrest of the disease in the venous channels and chemotherapy.

3. Chart No. 4 illustrates the limitations of chemotherapy in the presence of suppurating thrombus within the lateral sinus.

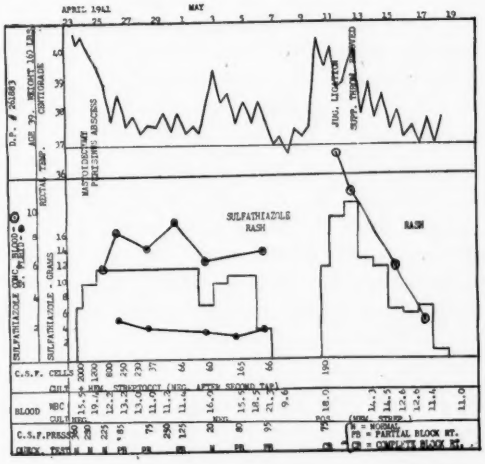

Chart No. 4. Suppurative otitis media with diffuse suppurative meningitis, extradural abscess and complete thrombosis of the sigmoid sinus, treated by sulfathiazole and surgery. High concentrations of sulfathiazole cured the meningitis but failed to sterilize the suppurating thrombus within the lateral sinus.

Case VI. D. P. This male patient of 39 years was admitted with middle ear suppuration of 12 days duration and diffuse hemolytic streptococcus meningitis. Queckenstedt test normal. Sulfathiazole in dosage of 12 grams daily and exenteration of the cell system and extradural abscess in the posterior fossa resulted in a rapid cure of the meningitis.

A chill and elevation of temperature from 10th to 13th postoperative days was followed by subsidence of all symptoms until the drug was stopped for 2 days then septic temperature, chills, and positive blood culture appeared.

Recovery followed ligation of the jugular and removal of the suppurating thrombus from the sigmoid and lateral sinuses, and heavy dosage of sulfathiazole.

Comment. The diagnosis of thrombosis was not established early because of the normal dynamics (Queckenstedt test) and the favorable response to therapy. Because the patient had suppurative meningitis repeated lumbar punctures were done and the dynamics tested each time. The Queckenstedt test could be considered as definitely positive only on May 10th. On all previous tests there was a slightly a-symmetrical response, the rise being less prompt and less high on the diseased side, although there undoubtedly was a complete block in the sigmoid sinus during most or all of the time in hospital.

This case illustrates two important points in the management of sinus thrombosis.

A. A complete block may exist in the sigmoid sinus, and yet the Queckenstedt test show only a slight or moderate a-symmetry on the two sides. The explanation which seems most probable in this case was that circulation through the cavernous and inferior petrosal sinuses, the jugular bulb and vein was not interrupted until long after the block in the sigmoid, thereby accounting for the rise in C.S.F. pressure on jugular compression, although less than normal, until further extension of the thrombus followed withdrawal of the chemotherapy.

B. The chemotherapy (sulfathiazole) was adequate to cure the meningitis, but still incapable of sterilizing the suppurating focus within the thrombosed venous sinus.

4. Chart No. 5 shows the clinical course in a case in which definite indications of mastoid suppuration were present, along with signs of sepsis and a strongly positive culture of hem. strep. in the blood stream. Complete recovery followed sulfanilamide therapy without surgery.

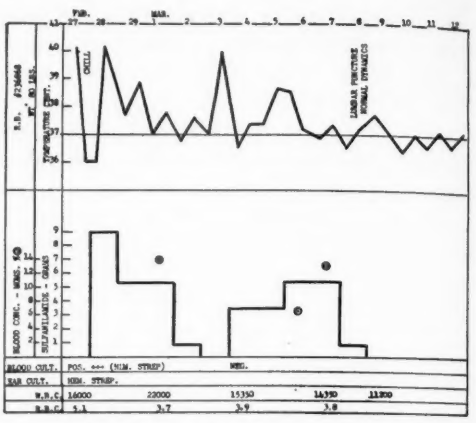

Chart No. 5. Otitis media and clinical evidence of venous sinus invasion in the second week of disease. Cured by sulfanilamide therapy without surgery.

Case history: R. B. Male, age 10. Onset of left otolagia 2-20-40 and spontaneous otorrhea the following day. Intermittent fever during the following six days. Marked vertigo on seventh day. Profuse purulent discharge from posterior perforation on admission, with acute tenderness over posterior part of the mastoid. Chills on admission. Positive blood culture on 2-27-40 and 2-28-40.

The course of the illness is shown in Chart 5.

Comment. It is possible in some cases to obtain a cure with chemotherapy alone even after signs of suppuration and invasion of the blood stream has occurred. It should be emphasized however that according to experience obtained up to the present, a cure by chemotherapy alone after a focus of necrosis and suppuration exists in the bone is the exception, rather than common occurrence. The safest course to pursue in such cases is chemotherapy plus adequate drainage of the focus of suppuration.

On the basis of experience with 25 consecutive cases of proven invasion of the venous sinuses from middle ear suppuration certain fundamental points regarding the care of this condition may be emphasized:

1. This type of complication whether it is already existent or only impending constitutes an urgent situation.

2. The first step in treatment should be chemotherapy. Recent experience favors sulfathiazole as the therapeutic agent of choice. An adequate concentration of the drug (blood

concentration of 6 to 10 mgms. per cent) should be obtained as soon as possible. This relieves the urgency for surgical interference.

3. The second stage, and the most essential part of the treatment, is adequate surgery. Extension of the suppuration can be temporarily prevented by the use of the drug but in the majority of cases adequate surgical drainage is essential in order to obtain a cure.

4. The surgical treatment should accomplish two objectives in order to be adequate: The removal or adequate drainage of the focus of suppuration within the bone and adequate drainage or removal of the suppurating thrombus within the venous channels.

The surgery should be carried out before other intracranial complications have developed either from the suppurating thrombus or directly from the focus within the bone. Otherwise the intracranial complications will have to be dealt with in the manner depending upon the particular complication present.

5. Five cases, or 20 per cent of the group, occurred secondarily to petrous apex suppuration. In such cases drainage of the suppurating focus of the apex is essential to prevent further complications, although the sinus thrombosis may have been arrested.

6. It seems probable that adequate chemotherapy if given in all cases of severe middle ear suppuration at the onset of the disease will prevent the development of complications of this type. However, when the disease has progressed to the point of necrosis and breakdown in the cell system or suppuration within a thrombosed venous sinus chemotherapy alone will not eradicate the disease.

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DISCUSSION

Dr. Alfred Lewy: There are two outstanding ideas in Dr. Lindsay's most excellent paper. The first one has been preached for many years but still requires reiteration. That is, that in acute surgical mastoiditis the operation should consist of complete exenteration of all cellular structures of the mastoid. To quote Neumann — "The operation for acute mastoiditis as radical as possible." This does not mean necessarily curettage of the antrum, which is recommended only when there is definite breaking down of bone in that region, but it does mean complete exenteration of the mastoid tip, of the petrous angle and zygmatic and retrofacial and retrosinal cells, and the follow-up of every lead of pus or broken down bone until normal tissue in encountered. If, in doing this exenteration, the dura or sinus are accidentally uncovered, it is not a matter of great moment so long as they are not damaged. A good mastoid operator should have no fear in approaching these structures. If the bone is being removed by mallet and gouge, he must be sure that the gouge is sharp and has no nicks in the edge. I prefer the Alexander type. The rongeur is used only for overhanging bone.

The second important contribution by Dr. Lindsay is calling attention to a possible destruction of bone or accumulation of pus in the petrous apex, which may be overlooked. One must consider the clinical history and the possible immediate findings of fifth nerve pain, trismus, tenderness on tapping in the preauricular region, and the X-ray. At the Eye and Ear Infirmary we routinely take a base plate showing both petrous portions, so as to have this for comparison later on in case the question of petrositis comes up. If that question arises, other positions, such as the Stenver, are also taken. I must confess, however, that x-ray information regarding the temporal bone is very difficult of correct interpretation; still we cannot do without it.

One patient — Case No. 5 of the list of fatalities — who had a cerebello-pontine angle accumulation of pus, might possibly have been saved by drainage of the cisterna pontis lateralis, as described by the in the Archives of Oto-Laryngology, June, 1928. I believe I saved at least two meningitis cases by this operation before the days of chemotherapy. It is indicated in labyrinthogenous meningitis or when one has reason to believe that there is an accumulation of pus in the lateral cistern.

Dr. Brunner, in the recent April issue of the Archives of Oto-Laryngology, calls attention to the latent pre-operative lateral sinus infection. I believe it is good surgery in all cases in which the pre-operative course of disease suggests a possible sinus involvement, to uncover the lateral sinus at the original operation. This is, I believe, best done by the mallet and gouge, as described above, followed by a Kerrison type of rongeur. In my personal experience, the lateral sinus has never been unintentionally opened or otherwise damaged by this technic.

The question of ligation of the jugular is not yet settled. My practice is to ligate and excise, including the mouth of the common facial, if no bleeding is obtained from below or if metastases are present.

Another interesting contribution by Dr. Lindsay is the successful use of sulfathiazole in Streptococcus meningitis, despite the theory that this drug does not pass the blood-brain barrier sufficiently. Dr. Bernard Cohen has recently reported a case of Staphylococcus meningitis cured by this drug.

Statistically, otogenic venous sepsis does not appear to have a better recovery rate since the advent of chemotherapy. I believe, nevertheless, that the incidence of this complication is less. This has not been demonstrated statistically so far as I know.

Dr. John R. Lindsay, Chicago (closing): I want to thank Dr. Lewy for his discussion. I quite agree that in that particular case, if we had diagnosed an abscess beneath the tentorium we might have been able to save the patient. The difficulty was that the child did not have a diffuse meningitis. He had increased pressure, but only a few cells in the spinal fluid. He was in our hands only a few days. He developed a left side hemaplegia before he died.

DIETHYL STILBESTROL

S. D. Soule, M.D., F.A.C.S.

ST. LOUIS

Diethyl Stilbestrol is an active synthetic product of unusual estrogenic potency. Stilbestrol is indicated in all such cases as warrant estrogen therapy. A voluminous literature corroborates the impression that there is no question as to the efficacy of this drug. The "Stilbestrol" which has been the subject of study during the past three years is the "diethyl" form. Reference in the literature to Stilbestrol is to this diethyl compound.

Stilbestrol has the fortunate property of being therapeutically active when administered orally. Via this route, it is as effective as by subcutaneous injection. It is, furthermore, more active than most natural or synthetic estrogens available on the market, and is infinitely less expensive than the estrogenic preparations generally prescribed at present.

Early in the phase of study of Stilbestrol, when knowledge of proper dosage was meager, there was general notice of unpleasant reactions to the drug. These undesirable symptoms were mainly gastro-intestinal, nausea and vomiting, occasionally headache, vertigo, tinnitus, sense of pelvic pressure and other symptoms were noted. The question was raised naturally as to whether these were toxic symptoms and that possibly, therefore, Stilbestrol was an unsafe or dangerous drug. These symptoms have been eliminated almost entirely since minimal therapeutic doses have been worked out. The previous undesirable responses were due apparently to excessive dosage. However, there was and may still be some question as to the toxicity of Stilbestrol. It is not necessary to enumerate the extensive bibliography in relation to this question. We here report the follow-up findings of a series of ten patients who were under constant Stilbestrol therapy from six months to two years.

Read before the Franklin County Medical Society, Benton, Ill., Nov. 26, 1941.

When we first began to use Stilbestrol, the dosage was varied from a fraction of a milligram to as much as thirty or forty milligrams per day. We determined the adequacy of the drug and the ideal dosage by the amount necessary to control the symptoms for which the drug was prescribed. In many patients the symptoms complex was checked with such objective tests as vaginal smears, but we have found that the best clinical evaluation obtained from the "symptom-response" of the patient. Gradually we discovered that an average dosage of one to two milligrams *or less* per day was an adequate amount of drug with which to anticipate satisfactory estrogenic response. The dosage is adjusted when the desired effect has been attained. When a result has been reached, dosage is reduced gradually to maintain the proper balance in such patients who require estrogenic therapy over long periods of time.

It has been generally accepted that thyroid is a valuable adjunct to much estrogenic threapy. Stilbestrol and thyroid are compatible. We have used the combination frequently. Dosage of Stilbestrol has diminished even more under such regime. From 0.25 to 0.50 mg. daily with such thyroid dosage as is indicated by basal metabolic rate has proved most efficacious.

Contraindication to the use of Stilbestrol refers back to the indication for its use. Once it is deemed advisable or necessary to administer estrogens, there is no contraindication to its use. Occasionally it is necessary to discontinue medication because of the side effects, but this is not a contraindication to its use. This incidence of intolerance to the drug has been less than five per cent since smaller dosage has been employed. We have prescribed Stilbestrol to menopause women who had had previous

STILBESTROL FOLLOW-UP

Pt.	Daily Dosage mg.	Date	Wt.	B.P.	P	BMR	RBC	WBC	Hg. (Sahli)	Differential E	St.	Seg.	L	M	Urine Alb.	Sug.	Micro.
L.M.	1.0 to	2-5-40	121	100/60	76	+ 7	3.86	7200	84						0	0	No casts
	0.1	5-1-41	129	104/70	70	—18	4.49	6200	86	1	1	56	40	2	0	0	No casts
E.H.	2.0 to	11-3-39	106	118/70	80				88						0	0	
	1.0	10-5-40	109	110/70	76	+ 7	5.5	10600	89						0	0	
		4-9-41	109	112/70	72	—17	4.48	7200	81	3	1	63	29	4	0	0	No casts
P.S.	1.0	3-12-40	153	106/70	80	— 8									0	0	
		5-10-41	150	114/74	76	+ 3	4.3		79	3	0	61	35	1	0	0	No casts Occ. wbc.
M.S.	40.0	10-4-39				—30	4.2		75						0	0	No casts
	to 0.2	4-2-41				+ 7	4.47	8900	88 B_1	1	1	68	27	2	0	0	No casts
D.S.	4.0 to	10-23-39	133	108/60	84	—37									0	0	.
	1.0	2-2-40	135	108/60	82	—12									0	0	.
		4-7-41	134	120/80	66	—27	3.99	7000	76	2	2	50	43	0	0	0	No casts
A.S.	1.0	8-10-39	175	100/60	70										0	0	.
		5-7-40	178	90/60	82	— 7	4.49	6550	84	1	0	51	45	0	0	0	No casts
H.K.	1.0 to	6-5-39	150	126/80	70		4.75		88						0	0	
	0.2	7-5-40	141		78												
		4-24-41	145	122/60	68		4.82		90	2	0	68	27	3	0	0	Occ. wbc.
L.K.	1.0 to	5-15-40	140	110/70													
	0.15	5-14-41	144	98/68	66	—26	5.4	6950	92	1	0	68	27	4	0	0	No casts
L.M.	1.0	2-1-40	125	120/80	72		4.01	7500	84						0	0	
		4-23-41	131	108/60	60	— 6	3.74	8350	80 B_1		0	57	40	2	0	0	No casts
F.B.	1.0	10-14-39	174	132/80	72		4.25		84						0	0	No casts
		5-7-41	165	128/76	56	—29	4.10		80	3	0	53	40	4	0	0	No casts

coronary attacks; to a patient with chronic cardio-vascular disease and chronic myocardial disease. Complete eunuchs, women in good general physical health except for amenorrhea or dysmenorrhea, women with debilitating arthritis have been treated. Youngsters of fourteen and women in the sixth decade have taken Stilbestrol. It can be reiterated that any person who needs estrogenic hormone therapy can be given Stilbestrol.

We here report the follow-up findings of a series of ten unselected women who received Stilbestrol constantly for six months to two years. From the clinical point of view, it was difficult to decide as to what tests might be done to detect any toxic results of medication. Basal metabolism, red and white blood counts, hemoglobin determination, blood differential, microscopic urine examination and blood pressure are noted before, during and after this duration of Stilbestrol therapy.

CONCLUSIONS

1. Stilbestrol is an active estrogenic drug.

2. Stilbestrol is orally effective.

3. A series of ten women who received continuous Stilbestrol from six months to two years is reported. No gross clinical evidence of toxicity was noted.

4. The effective dose of Stilbestrol is approximately one to two milligrams *or less* daily.

5. With such dosage, undesirable side effects were noted rarely.

4500 Olive St.

The Stilbestrol used in this study was supplied by Dr. D. C. Hines of the Eli Lilly Company and Dr. J. A. Morrell of E. R. Squibb and Sons.

Public health takes on a new urgency. Heretofore we have sought health primarily for its value to the individual. Now we must attain it for the nation's security. Surg. Gen. Thomas Parran. Jour. of Amer. Med. Assn., Mar. 28, 1942.

Right now is the moment to stand by the men who make the guns in an all-out fight to eradicate this leading saboteur of Victory — tuberculosis. Kendall Emerson, M.D.

AVULSION FRACTURE OF TIBIAL TUBERCLE

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Avulsion fracture of the tibial tubercle is moderately uncommon and is a clinical entity not to be confused with Schlatter's sprain or Osgood-Schlatter's disease.

Goldman[2] in 1930 summarized Speed's[6] description of this injury and reported one case of his own which healed by fibrous union. Overton[5] in 1937 reviewed the literature and added one more making a total of eight reported cases. Since that time, Cattaneo[1], Morganti[4] and Keyser[3] have each recorded the condition.

Figure 1. Appearance on April 7, 1941 immediately after accident.

The following case is somewhat unusual in that while the patient was only fifteen years of age, ossification was complete, the true fracture usually occurring in middle aged and elderly individuals. It is always due to trauma which may be direct or result from a violent contraction of the quadriceps. The proximal fragment is then carried upward with the patella and requires open operation for reposition.

CASE REPORT

On April 7, 1941 at about 2:00 P.M., a white boy, age 15 years, was practicing for the high jump. Upon landing, he felt pain in the region of the R. knee and was unable to extend the leg. This was followed shortly thereafter by swelling in the area about the patella.

When seen, about 4 hours after the accident, the patient had placed the leg in a position of about 30 degrees of flexion. Flexion but not extension was possible. He complained of no pain and there was only slight tenderness on palpation. There was a large fluctuant swelling about the knee joint. The patella was freely movable upward and laterally but could not be brought below its normal position. A mass could be felt below and moving with it. A Roentgenogram showed a complete comminuted fracture of the

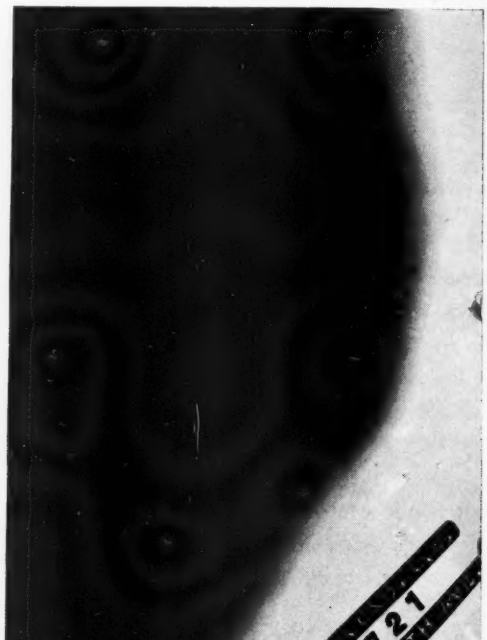

Figure 2. Appearance on October 13, 1941 six months after operation.

tibial tubercle with displacement upward of the fragments. Pain at this time was slight.

Operation. — At 6:00 P.M. under spinal anesthesia (15 mg. of tetracaine) an incision was made over the site of the tibial tubercle and a large clot was removed. The patellar ligament was brought down into the wound and was found to have a six cm. strip of an-

terior tibial periosteum attached. The incision was extended downward and the periosteal strip and patellar tendon were attached to their original sites by fine silk. The skin and subcutaneous fascia were closed and a posterior moulded cast applied.

Passive motion was instituted in two weeks, active motion in four and the patient was allowed to walk in six weeks. Functional recovery has been complete.

COMMENT

This type of fracture is rare, constituting only a very small per cent of all fractures of the body. It is about equally due to muscular exertion or direct trauma. Recovery is usually complete but can be achieved only by open operation.

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TRYPARSAMIDE THERAPY AND IMPAIRMENT OF THE OPTIC NERVE

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Tryparsamide is distinguished from the other remedies commonly used in the treatment of syphilis (1) by the exceptional ease with which it passes through the barrier between the blood and spinal fluid, and its apparent effectiveness in neurosyphilis; and (2) by its amazingly low general toxicity as compared with that of other arsenicals. These characteristics of tryparsamide have insured for it an important place among the remedies for neurosyphilis.

In many leading European countries where syphilis therapy is controlled and often paid for by state organizations, numerous syphilologists are inclined, in cases of neuro-syphilis, to rely upon early fever therapy in combination with a short preparatory course of the arsenicals, the heavy metals and the iodides. This therapeutic attitude is justified by economical as well as prognostic viewpoints. The institutions interested in the patient's rapid recovery assume that an early bout of fever therapy is the most radical treatment, and therefore offers the best prognosis for prompt and lasting recovery. Economic necessity supersedes the consideration that improvement from intensive treatment with less drastic remedies is possible, that fever therapy carries with it certain dangers and is most strenuous and unpleasant for the patient.

In this country, where state economy does not influence medical decisions and where the financial burden of the treatment is carried by the patient or his family, fever therapy should be used only when there are definite medical indications. The Cooperative Clinical Group, therefore, recommends standard treatment or, if necessary, individualized methods of injection therapy in neurosyphilis. Fever therapy (especially malarial or artificial fever therapy) is advised only if these methods, used for a reasonable time, should fail to give the expected result and if the patient's general condition permits the strenuous procedure of induced fever therapy.

In addition, one must remember that fever therapy may lead to insurmountable expenses for the patient, who may already have spent a great deal of money for antisyphilitic treatment and may, even after the fever, be required to receive more injection therapy. It is easier, on the whole, for the patient to carry the divided costs of long-continued injection therapy, especially if he can continue his usual employment, which fever therapy may force him to give up. Furthermore, in small communities other difficulties of various kinds are encountered at the initiation of fever treatment. The patient's fear that society might learn of the nature of his illness and his reputation be harmed has to be respected. Fever machines are usually not available, and the patient dislikes being treated far away from home and family. Malaria therapy, though feasible in any well-conducted hospital, requires special nursing and detailed experience by the responsible physician. Typhoid and other non-specific methods of artificial fever therapy

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are only a substitute, less effective than and as inconvenient for the patient as the better methods mentioned.

All these considerations together induce most of the patients, especially those suffering from asymptomatic neurosyphilis with positive spinal fluid, to prefer tryparsamide treatment, which can be carried out inconspicuously in the physician's office and often gives as good a result as that produced by malaria therapy. If tryparsamide should prove to be ineffective, the patient still has the possibility of subsequent inoculation with malaria.

On the other hand, the ease with which tryparsamide may be administered has often led to its indiscriminate use. Not only is it given wrongly during early syphilis, but its most serious disadvantage, the danger of optic nerve atrophy is neglected and irreparable damage is done to the patient. It is our purpose, therefore, to emphasize this danger and to show how it can be avoided.

Tryparsamide, a pentavalent arsenical chemically related to atoxyl, is a white crystalline, odorless powder which is easily soluble in distilled water. Its arsenic content varies between 25.1% and 25.5%. Aside from its pharmacologic characteristics mentioned above, namely its low toxicity and its high rate of penetration into the central nervous system, the drug possesses a distinct tonic and resistance-building action which is of great importance for the neurosyphilitic patient. Its elimination is very rapid, and consequently its accumulation in the body is negligible. According to Young and Muehlberger[1], 88-95% of the drug leaves the body during the first 24 hours after administration. Its spirocheticidal action is low in comparison with that of other antisyphilitic drugs.

Large doses of tryparsamide are tolerated, and even required, in the treatment of neurosyphilis. It is customarily given intravenously, once a week, in doses of 1-3 grams dissolved in 5-10 cc. of distilled water. Although intramuscular or subcutaneous injections are relatively painless, the intravenous route is preferred. The injections, which may be given along with injections of heavy metals or administration of iodides, should be continued over a long period of time. A series of 70 or more may be given, either continuously or alternately with courses of bismuth or mercury.

Systemic reactions to tryparsamide are uncommon, although it seems that recently an increasing number of the various reactions have been reported. Stokes[2] emphasizes that therapeutic shock effects may occur during the first 6-10 injections, and maintains that a preparatory treatment with one of the heavy metals or arsphenamines would reduce this type of complication, as well as that of eye injury.

Tryparsamide is indicated, with few exceptions, in all forms of neurosyphilis in which the standard methods of antisyphilitic treatment have proved ineffective. It is necessary to emphasize that the diagnosis be made after due valuation of the findings in the spinal fluid. We have observed that some patients are treated with tryparsamide at the end of a standard treatment as a kind of neurosyphilis "prophylaxis," although the spinal fluid has not been examined at any time during the course of the antisyphilitic therapy. The physician's motive in such cases is to give the patient the "benefit" of the tryparsamide without the unpleasant experience of a spinal puncture. This therapeutic approach, however, is to be condemned, since it endangers the patient unnecessarily and leaves unanswered the question of whether the patient's central nervous system is at all involved. No tryparsamide therapy should be started unless the spinal fluid, obtained either by spinal or cisternal puncture, has been tested. The drug is especially useful, as Moore[3] has pointed out, if neurosyphilis is present in a patient with cardiovascular syphilis. In such a case, the patient with cardiovascular changes will avoid the dangers of fever therapy and yet receive treatment powerful enough to control the alterations in the central nervous system as well as in the cardiovascular apparatus.

The use of tryparsamide is contra-indicated in the early infectious period of syphilis and in all forms of late syphilis without central nervous system involvement. It should not be given an unnecessarily long trial in a case of rapidly advancing paresis when there are no contraindications to fever therapy, or in other cases where the patient does not properly respond to the treatment clinically or serologically after the drug has been administered in adequate doses for a period of up to one year. Intolerance to the

drug and hepatic insufficiency, of course, prohibit the use of tryparsamide. Pregnancy is a contra-indication for it, since the effect of the drug on the optic nerves of the fetus is unknown. (Stokes[2]) Finally, it is usually contra-indicated when the optic nerve is involved by the disease and if eye symptoms develop following injections of the drug.

Mayer[4] has used tryparsamide in the presence of syphilitic optic atrophy, but the risk of further optic injury overshadows the potential benefit of this procedure. In addition, other therapeutic procedures (malaria, intraspinal arsphenamine, artificial fever) have often proved to be more effective in this condition. Extreme caution must be exercised in patients with tabes dorsalis, even those with normal eyes, because it is in this form of neurosyphilis that the ocular reactions to tryparsamide are most frequent.

Almost all toxic reactions due to arsenical therapy, such as dermatitis, jaundice, nitroid, crisis, etc., have occasionally been observed during the administration of tryparsamide.[5, 6, 7, 8, 9, 10] However, the most dreaded complication of this compound is sudden impairment of vision. This untoward reaction usually occurs from 24-48 hours following one of the first 10 injections in 3 or 4% of the patients with normal eyes. The symptoms may be classified as subjective and objective, the latter, in all probability, being an indication of a more advanced state of the toxic action of the drug on the optic nerve.

The subjective ocular symptoms of tryparsamide are often spectacular. The patient may complain of dazzling, heat waves, light flashes, spots, and many other sensations before his eyes. There may be a marked tendency to collide with objects, which makes the patient apprehensive of losing his eyesight. Muncy[11] has pointed out that some patients may undergo mental changes of an exciting nature, which may be explained as a psychic reaction to the subjective ocular phenomenon or as due to some general toxic action of the drug on the central nervous system. Hallucinations, delusions of persecution, and even acute insanity may complicate the picture, showing that the eye manifestations are only a part of a general reaction.

The most frequent objective ocular reaction is a contraction of the peripheral visual fields with sparing of the central fields. There is usually more narrowing above, below, and nasally, with relative sparing of the temporal field and leaving the blind spots and central vision normal. This type of field defect has been called the palpebral slit field of tryparsamide. The color fields may be contracted but usually are less affected than the form fields. The contraction for the red field may be greater than that for blue. Only occasionally are central and ceco-central scotomata observed. As the narrowing of the visual fields progresses toward the center of fixation, the light sensitivity of the central retina may also be reduced. Occasionally the progress may be so rapid that the patient becomes totally blind after one intravenous injection of tryparsamide. In spite of the marked changes in the fields, light sense, etc., one seldom observes alterations in the retina or optic nerve on direct ophthalmoscopic examination. Therefore, in the prevention of visual impairment it is important that one must not depend on the ophthalmoscopic examination but should make accurate visual field examinations by an objective method.

The pathologic process in ambyopia caused by tryparsamide is not well understood. Lillie[12] thought the effect to be perineuritis of the optic nerve with diffuse degeneration and secondary hypertrophy of the interstitial glial tissue (gliosis), most marked in the periphery of the nerve and slightly around the blood vessels in the substance of the nerve. Leinfelder[13] studied the optic nerves and retina of a patient nine days after the intravenous injection of one gram of tryparsamide and seven days after the onset of blindness. He observed acute degeneration of the retinal ganglion cells of the innermost portion of the inner nuclear layer. Evidence of acute primary degeneration of the optic nerve and tracts was not present, and there was no evidence of the general pathologic changes seen in arsenic poisoning. Verhoeff[14] remarked in his discussion of the same case that the retinal ganglion cell degeneration could be secondary to the degeneration of the fibres of the optic nerve, even though such alterations were not seen histologically.

The visual changes indicate that the drug does not affect the entire cross-section of the optic

nerve at one time, but only the distal peripheral portion. The early impairment occurs apparently in the peripheral portion of the nerve where the macular fibres are situated near its center, and the fact that pallor of the disc seldom occurs supports this view. The reaction is probably a direct toxic effect of tryparsamide on the nerve fibres, and it is quite unlikely that it is a reactivation of a syphilitic process in the glia as Lillie[12] thought.

It is only very occasionally that the differential diagnosis between syphilitic optic atrophy and secondary optic atrophy resulting from tryparsamide therapy causes difficulty. The differential diagnosis can be easily made from the fundus and field changes alone, but a history of previous tryparsamide therapy would be of great practical value. The field changes of syphilitic optic atrophy do not show the sparing of the temporal field, the contraction is more concentric, and there is often a central or ceco-central scotoma with or without contraction of the peripheral fields. Occasionally the peripheral fields may be narrowed without scotomata or there may be nerve bundle defects. In some cases of syphilitic optic nerve atrophy, the peripheral fields are contracted down to five degrees or less with normal central vision.

An important fact is that in syphilitic optic nerve atrophy as well as in atrophy due to tryparsamide field defects may occur long before any changes in the nerve head and vision can be seen clinically. The late atrophy from tryparsamide is not distinguishable from primary syphilitic optic atrophy when total blindness has occurred.

The following case I observed in the Christie Clinic illustrates how the loss of vision may rapidly occur following a tryparsamide injection and how the subjective symptoms long precede the findings of optic nerve atrophy in the fundus.

CASE I

(Abstract of history) A 58-year-old machinist with a positive history of syphilis suffered from tabes dorsalis recognized by the history of lightning pains, tabic crisis, and the physical evidence of absent patellar Achilles tendon reflexes, Head's zones, positive Romberg sign, and Argyll-Robertson pupils. The blood serologic reactions and the spinal fluid examination were negative.

The patient was referred to the hospital, and tryparsamide, 1 gm., was given without previously examining the eyes. Two days after the injection an ophthalmologic examination was performed with the following report: "Distant vision normal. Patient reads J 0.50 print easily with plus 3.00 D lens. Argyll-Robertson pupils. Fields are roughly normal in the eight principal meridians with a 2 mm. white test object at about 300 cm. distance. Discs essentially normal. 3 Minimal sclerosis of the retinal arterioles."

A second injection of 1 gm. tryparsamide was given a week after the first. At that time the clinician reported no symptoms referable to the eyes. Two days later the patient's vision began to fail, and four days after the injection he was totally blind. A therapeutic regime of intravenous typhoid injection and forced fluids was of no avail. The patient did not regain his vision. Both optic nerves showed complete atrophy when examined six months later.

To avoid injury to the optic nerves from tryparsamide, the vision and perimetric fields should be regularly recorded before the beginning of the treatment, so that any change that may occur can be quickly detected on subsequent examinations. Since the greatest danger of a reaction is during the first ten injections, careful studies of the eyes by a competent ophthalmologist should be made before each of these treatments. Patients should be warned to report visual disturbances of any kind immediately. If these are noticed, the eyes should be reexamined at once and the treatment stopped for one month. If no objective alterations in the optic apparatus are observed during this period of time, treatment may be cautiously resumed with tryparsamide. It is permanently discontinued where there is objective evidence of a tryparsamide reaction. In such a situation most cases will fully recover if no further tryparsamide is given. The fact, however, should not lead to therapeutic inactivity, since loss of time may cause serious permanent damage to the retina and optic nerve. Forced drainage of the spinal fluid, foreign protein therapy, vasodilation by the use of electric pads and pilocarpine injections, and magnesium sulphate purges have often helped to assure recovery of the patient's eyesight.

New methods for the prevention and treatment of optic nerve injury due to tryparsamide have been suggested in recent years by the progress in the knowledge of vitamin deficiencies.

Muncy,[11] impressed by the similarity of tryparsamide reactions to toxic amblyopia, used vitamins B_1 and B complex routinely in 50 cases treated with tryparsamide and, in addition, in a number of tryparsamide reactions in the optic tract. He did not see a typical case of optic nerve atrophy among the patients of the first group and was able to restore vision in those cases in which a reaction had already occurred. Most remarkable, however, is the fact that he could resume the use of tryparsamide combined with vitamin B_1 in patients who were suffering from optic nerve impairment due to previous tryparsamide therapy.

The theoretical explanation for the effect of vitamin B is not yet established. Clinical and experimental observations[15, 16] have shown that there are correlations between deficiencies in vitamins A and B and nervous degeneration. Moore and Woods[17], in a critical review of syphilitic optic atrophy in 1940, concluded that "the pathogenesis of tabes and of primary optic atrophy may conceivably depend on a combination of neurosyphilis and dietary deficiency." The same may be said of the interrelationship between optic nerve atrophy from tryparsamide treatment and avitaminosis. Since many patients with a tryparsamide reaction have lived on a well-balanced diet, where shall one look for the cause of the vitamin deficiency? Perhaps the diet did not contain enough vitamins many years back, and the damage done at that time predisposed the patient to the tryparsamide reaction. Perhaps the body, due to some third functional disturbance, is not capable of digesting and absorbing the full amount of vitamins furnished with the food. The future will probably yield the answers to these questions.

One of our patients with imminent tryparsamide optic nerve atrophy was treated with vitamins B_1 and B complex, and his vision was restored. The abstract of his history is as follows:

CASE II

A white man, aged 58, complained of loss of weight, general fatigue, and weakness of the bladder. There was no past history of syphilis or other diseases. A diagnosis of tabes dorsalis was established on the basis of Argyll-Robertson pupils, absent patellar reflexes, absent Achilles tendon reflexes, and a positive Romberg sign. The Wasserman reaction was four plus; the Kahn was positive; but the spinal fluid examination was negative. Urologic examination showed "cord bladder and cystitis."

Ophthalmologic examination revealed "vision 20/20 (with correction) each eye, reads J 0.50 print easily; fields normal; pupils round, small, equal, react to accommodation but not to light; fundi normal . . . "

In addition to care of the uro-genital tract, antisyphilitic treatment was initiated with Bismuth injections. Intercurrent influenza caused an aggravation of the patient's complaints. Tryparsamide, 1 gm., was injected after re-examination of eyes showed normal perimetric fields and normal vision. A week later, since the opthalmologic findings were normal, a second tryparsamide injection of 1 gm. was given.

Six days after the second tryparsamide the patient returned to the clinic complaining of foggy vision, light flashes, and spots before his eyes. He collided with objects and hit the sides of doors, bruising his shoulders. His vision was 20/200 in each eye and he could not read. Visual field study revealed a small relative central scotoma and typical palpebral slit fields. The diagnosis was visual impairment due to tryparsamide. Under daily regime of thiamine chloride, 10 mg. intramuscularly, 3 capsules of a proprietary vitamin B complex preparation by mouth, and injections of 1 gm. sodium thiosulfate intravenously, the vision improved to 20/20 for distance and 14/14 for near with correction within four days. The peripheral fields widened almost to normal in four weeks.

Though substantial proof is lacking that this patient's vision would not have improved without the vitamin B_1 and B complex therapy, this observation seems to support Muncy's[11] extended experience.

In summary, tryparsamide, because of its unique pharmacologic action, is a useful drug for late neurosyphilis if indications and contraindications are carefully observed. The danger of optic nerve atrophy loses a great deal of its seriousness: 1. if the patient is properly prepared for the treatment; 2. if the patient's visual fields are thoroughly and regularly checked by a competent ophthalmologist; and 3. if the patient is protected against visual damage by the simultaneous administration of adequate amounts of vitamins B_1 and B complex with the tryparsamide.

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ADDRESS OF GOVERNOR DWIGHT H. GREEN

At Presidents' Dinner of Illinois State Medical Society, Abraham Lincoln Hotel, Springfield, Wednesday Evening, May 20.

The opportunity to address you this evening affords me a double pleasure, in that you enable me not only to enjoy your social hospitality, but even more important, to express appreciation of the invaluable services your profession is rendering throughout the state and the nation.

You have just completed three days of intensive discussions involving your profession and the impact upon it of the war into which we were thrust by one of the most treacherous deeds in history. Your deliberations have been keyed to the demands of the emergency and the one thought uppermost in the minds of each of us —victory.

We are confronted with a gigantic task—but we, as Americans, have been accustomed to facing such tasks and never have we flinched from the determination that we must win—and we will win. The courage within our hearts has been strengthened to the degree where we have determined that nothing shall stop us. We have thrown our all into this tremendous effort, and day by day we are adding the power which eventually will tip the scales on the side of right, forever destroying the totalitarian theory of might.

We dare not permit those who think only in terms of their own aggrandizement to destroy the values of personal liberty and freedom of opportunity for which we in America have stood for almost a hundred and sixty-six years. We dare not contenance upon the face of the earth the dictatorships which destroy a whole people in their savage lust for power.

America has ever stood—and will ever stand —for the rights of citizens to enjoy the fruits of their labors, as free men, not as slaves to a doctrine forged in the fires of human sufferings.

We, in Illinois, not only have sent more than a hundred and fifty thousand men into the nation's armed forces, but we are fighting relentlessly on the home front. That battle is being waged in every factory, on every farm, in every home, in every church and in every school. It is being waged in the office of every physician, and it is most heartening to know that you, engaged in one of the most Godlike professions known to man, are contributing your every possible aid to the all-out efforts of war.

We, in Illinois, were galvanized into a unity of action on that fateful Sunday of December 7 when the forces of black treachery struck at Pearl Harbor. We did not wait for the call to arms, nor were we unprepared for the demands which we knew would be made upon us. The Illinois State Council of Defense had been organized months before and was ready for action, and departments of state government were mobilized and they put all use but war into the background.

The State Council of Defense shares with me the knowledge of the grave responsibility which rests upon the shoulders of the medical profession. I want to express our gratitude—and I know that I speak for every person in Illinois —and I want to say that every task undertaken by you has been magnificently accomplished.

Through your wholehearted co-operation, we have established nineteen counties as defense zones, and in three counties, well staffed health departments already have been set up for the

duration of the war. Organization of others will follow and their creation will maintain the health and sanitation necessary to enable war workers to pour forth a continuous stream of munitions for the men who fight our battles on the world's far flung fighting fronts.

With your invaluable assistance, emergency water corps have been formed, and today more than 600 communities in Illinois are a part of that vital organization. Through this great grouping of communities, the State can utilize, in the shortest possible time and in the most efficient manner, every water resource in the state. Under this arrangement, we are prepared for quick action in the event of damage in any emergency.

Through the medical profession and the State Department of Public Health and the University of Illinois, courses of instruction have been launched for sanitation wardens. More than 400 persons have been taught the principles of sanitation in emergencies, and we will continue this work until the entire states has been made conscious of all possible demands.

As Governor of the state, I am particularly pleased to point out—and I am sure my pride is pardonable—our program for the rehabilitation of rejected military selectees.

In this work the medical men of many communities, our public health and welfare departments and selective service officials are rendering a service not only unique in our history, but as vital and important to our manpower as rehabilitation of men whose lives have been damaged by actual combat service.

The state's vast hospital facilities have been made available to these co-operating agencies so that those men rejected for correctible physical defects can avail themselves of the opportunity for rehabilitation. It is a service which in war time is most essential to the all-out war effort, it also is a service, which, upon the victorious conclusion of this war, will provide men fit for the task of reconstruction and will restore our manpower to its full ability to achieve.

The achievements of the medical profession of Illinois in co-operation with Department of Public Health and through its own channels, are almost countless. We all recognize the peace time contributions to our health and happiness made by the men of medicine, but in times of war many of these contributions assume added significance.

Illinois has long been a leader in the venereal disease control program and the tremendous value of such work now cannot be too strongly emphasized. To you who have assisted in the establishment of control centers, and to you who have enabled us to tear the mask from the insidious and previously unmentionable subject, must go the everlasting thanks of a grateful people.

Illinois, ranking among the three highest States in the nation in industrial production for peace and for war, has need of industrial hygiene so that we can keep our workmen free from disease and from other influences leading to the destruction of health. To this you have given your time and knowledge, so that we rank high in the freedom from those influences which would detract from our gigantic production tasks. Yes, the physicians and surgeons of Illinois march tirelessly shoulder to shoulder with our industrial workers, our farmers, our labor groups, and our armed forces in this fight for victory.

I would fail in my duty as Governor unless I express the state's pride in the many physicians and surgeons who surrendered their practices when they heard the call to the colors. Today they are rendering equally brave service in our country's hour of need with the men who man our guns, ships, tanks and planes.

Your profession has caught the spirit of war, and you are in the front rank of those of us who feel that we must have a singing, shouting, flag waving war—a war of attack—if we are to emerge victorious. And we will be victorious.

Yes, we will win this war—this contest between government of the people, by the people and for the people, against the governments of oppression and intolerance. The way to victory may be long and difficult, but we in America have never lost a war, and that priceless tradition will inspire us to any sacrifice, to any endurance.

We shall emerge a greater America—more powerful, unchallenged, untrammeled and free—and with even greater consciousness than ever before that freedom of thought, of religious worship, of speech and of race—that these freedoms form the foundation of our American way of life.

THE NEED OF UNIFORM STANDARDS OF MEDICAL LICENSURE IS URGENT

Journal Says Results Of State Licensing Examinations In 1941 Are Striking Evidence Of Lack Of Uniformity

Immediate steps should be undertaken for the establishment of uniform standards of licensure of physicians, *The Journal of the American Medical Association* declares in its May 9 issue, pointing out that war conditions emphasize the great need for such uniformity. *The Journal* says:

"The results of the state licensing examinations published in this issue of *The Journal* are striking evidence of the lack of uniformity of standards of licensure among the various states. Seven states reported not one failure in their 1941 licensing examinations; indeed, they had not had a falure in the past five years. Twelve additional states have reported failures of less than 1 per cent during the same period. Other states, notably New York, have each year reported a high percentage of failures.

"In New York 21.8 per cent of the graduates of the New York State medical colleges who tried the New York State licensing examinations failed, while 39.4 per cent of the graduates of other approved medical colleges in the United States who tried these same examinations failed. Of the 145 graduates of New York State medical colleges who tried licensing examinations in other states, four, or 2.8 per cent, failed.

"The lack of uniformity of results in some states is made more obvious by the fact that a candidate is passed if he receives an average of 75 per cent and is not below 50 per cent in any subject. Furthermore, in case of failure in not more than two subjects the applicant may be entitled to another examination in the subjects failed and is considered conditioned and is not reported as a failure.

"Paradoxically, New York, which reported the highest percentage of failures among the graduates of approved medical colleges on its own examinations, issued a greater number of licenses on the basis of credentials without examination than did any other state.

'In spite of this lack of uniformity, the fact is striking that the graduates of the foreign medical schools and the unapproved schools in the United States showed the highest percentage of failures, 59.6 and 46.0 respectively. Six states licensed graduates of unapproved schools during 1941. Four states granted unlimited licenses to practice medicine to graduates of osteopathic schools.

"The best interests of the public and of the medical profession seem to demand serious thought right now on the establishment of uniform standards of licensure. These not only would facilitate the migration of qualified physicians from one state to another but would offer to the public greater assurance of the training and competence of practicing physicians. War conditions, involving as they do the migration of great masses of the population including physicians, emphasize the great need for such uniformity.

"Is it unreasonable to hope that all states will sometime be willing to maintain standards high enough to make such uniformity possible?"

$1.00 *Spent to Save* $20.00. After the New York State Insurance Fund had paid out more than $900,000 for medical and nursing care and compensation for tuberculosis among employees of the Department of Mental Hygiene, the legislature appropriated $45,000 for the control of the disease in the state mental hospitals. Since 1935 120 cases of tuberculosis have been declared compensable by the State Insurance Fund. John K. Deegan, M.D. et al. Amer. Jour. of Pub. Health, Apr. 1942.

Let us consider the attitude of labor toward the control of tuberculosis in industry. In the first place, industrial workers know all too little about tuberculosis. They need education and plenty of it. A pool would probably show that a majority of them still believe the disease is hereditary, that it is a disgrace to the family and that once it is contracted, the chance of recovery is very small. They buy Christmas Seals and read that tuberculosis is being wiped out through their help. Probably very few understand that more workers die of tuberculosis during the active working life, 18 to 45 years, than die of any other disease. It exacts its huge toll in the prime of life when productive capacity is at its height and when resistance to disease is, or should be, also at its height. Between the perils of childhood and the dangers of old age, tuberculosis sneaks in and snatches more victims than any other disease. Mathew Woll. Pennsylvania's Health, Feb., 1942.

TREATMENT OF VARICOSE VEINS SHOULD BE INSTITUTED EARLY

It Will Lessen Discomfort And Better Enable Patient To Carry On His Required Duties, Physician Says In Article In Hygeia

The earlier treatment for varicose (unnaturally swollen) veins is instituted the less discomfort a patient must endure and the more able he will be to carry on his required duties, Bernard Behrend, M.D., Philadelphia, points out in *Hygeia, The Health Magazine.* "It is a far better policy," he advises, "to obtain early advice and prevent the addition of more varicosities than to wait until the entire leg is studded with varicose veins."

The causes of varicose veins are numerous, Dr. Behrend explains. "Obesity, whether caused by an endocrine or dietary disturbance, is prevalent among patients suffering from varicose veins. Satisfactory results from treatment in this type of case can only be assured if measures to institute weight reduction are likewise prescribed. If no attempt is made to overcome the factor of obesity, recurrence of varicosity is likely.

"Phlebitis, or inflammation of a vein, whether superficial or deep in the leg, has been noted as a cause of varicosities. Often a vein will reopen after phlebitis has subsided, but if it should become permanently closed other veins must function in its place, and a compensatory dilatation of surrounding veins may occur. Thus it is important to determine in a patient with varicose veins whether or not the deep veins are closed, for there is danger of causing a permanently swollen leg if active treatment is undertaken in the presence of stoppage of the deep venous circulation.

"Occupation is undoubtedly one of the prime factors contributing to varicose veins in patients who must stand or walk at their work. . . . A definite number of such men and women give evidence of varicose vein formation after a period of time. . . .

"The number of varicosities caused by tight garters in both men and women patients is surprising. In warm weather, some patients' legs have a tendency to swell, and a tight garter around the lower leg or thigh restricts the venous return of blood. People who must stand at their employment should not wear tight, constricting circular garters, and a patient who is undergoing treatment for varicose veins should never wear circular garters.

"During pregnancy, many women suffer from varicosities which cause considerable pain. As a rule, these varicose veins are caused by increased weight, pelvic congestion and pressure of the enlarged uterus (womb) when the veins return the blood from the legs. Most varicosities disappear some weeks after delivery, but they may recur if the patient again becomes pregnant. After several pregnancies the varicosities may persist until proper treatment has been started to eradicate them."

For the pregnant patient with varicose veins Dr. Behrend suggests that an elastic bandage or stocking be applied from the instep to the upper thigh. If the patient has severe varicosities in the early months of pregnancy, careful injection of medication into the veins can be tried. The patient should rest with the legs elevated on a pillow to help the venous circulation and decrease the swelling in the legs.

Varicose veins, the physician says, appear to affect whole families. In considering this, he suggests that it is well to determine whether in all generations affected there were many pregnancies and whether the men in the family suffered from varicose veins because long hours of standing were required in their occupations. "In such situations," he advises, "the proper procedure is to visit the physician to determine what can be done to prevent a repetition of the same disorder.

"Varicose veins frequently are first evident when a patient begins to walk about after a long illness. This is due to the fact that the patient's leg muscles are weak, the vein walls have lost their elasticity and the skin is relaxed. The change to standing position under those conditions with the return of the pressure in the veins has caused the blood vessels to dilate. Unless measuers to counteract the change of posture are adopted, these veins will develop into true varicosities. Before such a patient is allowed to leave his bed an elastic stocking or bandage should be placed on both legs from the foot to the knee. Essentially this will give the added support that is necessary until the legs have once again regained their former strength."

PRIMARY OVARIAN CANCER

(J. E. Hall, Brooklyn, in *The Brooklyn Hosp. Jr.,* April)

Primary ovarian cancer is one of the most fatal forms — mortality 90%. In view of the fact that over 80% of the patients were women over 40 years of age and because the disease is practically symptomless until it is well advanced, every women over 40 should have a pelvic examination every six months. This procedure probably would enable us to discover a much higher percentage of these tumors before they become so far advanced. Furthermore, other early lesions of the genital tract would be found.

The procedure of choice, as soon as diagnosis is made, would seem to complete removal of the pelvic organs, then extensive postoperative roentgen therapy. Under such a plan of treatment in early ovarian cancer, before the onset of pain and abdominal enlargement — which are late symptoms in the disease — the survival rate would be greatly increased.

Automobile accidents on the streets create a great stir, but tuberculosis causes three times as many deaths. R. T. Westman, M.D., Health Off., Kansas City, Kan.

Clinicopathologic Conferences

J. J. Moore, M.D., Department Editor.

PRESENTATION OF CASES BY
A. R. K. MATTHEWS, M. D.
St. Anthony's Hospital
ROCKFORD

CASE 1 — BILATERAL WILMS' TUMOR

Dr. E. T. Leonard: This man of 59 years has an essentially negative history prior to March, 1940. At this time he suffered an attack of severe upper abdominal pain, without vomiting or jaundice. This continued for four days, and then subsided. Subsequently over a period of eleven months he had several similar attacks of pain. These were less severe, and he was able to work at all times. He was first seen on February 18, 1941, complaining of dyspnea, fatigue on exertion, and pain in the right flank and hypochondrium.

Physical Examination: Temperature, pulse, and respiration normal. Large readily palpable mass was found filling the upper two-thirds of the right abdomen. The liver margin was distinct from this mass, and extended four fingers below the costal brim. There was some dullness in the base of the right chest, otherwise the findings were essentially negative.

Laboratory Examination: Urine: Many R. B. C.'s and pus cells; Albumin + Daily output—1,700 cc.

Blood: R. B. C. 3,900,000; Hg. 12.2 gms.; W. B. C. 8,800; Eos. 2; Stab. 12; Seg. 72; Lymph. 10; Mono. 4. Urea Nitrogen 19 mgm. per 100 cc. Wasserman and Kahn negative.

X-ray: Intravenous and retrograde pyelography. (Dr. Theo. Lang and W. Seifert) Large tumor of right abdomen. Bizarre and distorted right kidney pelvis. Kidney appears displaced and rotated, by tumor. Left kidney normal. Diagnosis: Huge retro-peritoneal tumor, right side. (Apparently extra-renal).

Surgical Exploration: 1. Aspiration by needle. Obtained 700 cc. sterile reddish yellow fluid. Some R. B. C.; no characteristic odor; high protein content.

2. Exposure of mass revealed inoperability. Origin and type of tumor still not demonstrated. Considerable necrosis noted. Biopsy diagnosis: Malignant neoplasm. Possible carcinoma of renal origin.

Patient expired one month after admission to hospital.

Autopsy: (Dr. A. R. K. Matthews) The principle findings of interest are in the abdomen and thorax. In the abdomen, the liver presented itself as an extremely large organ, extending all the way to the left flank. Its weight was 3,800 gms. Its entire right lobe was replaced by metastatic tumor growth. There were similar nodular tumor deposits throughout the remainder of the organ. Several stones were present in the gall bladder. The omentum and mesentery were studded with some nodular tumor deposits. The retro-peritoneal tumor was found as expected. Its weight was 3,070 gm. As you see, it appears to arise from, and replace the upper and central portion of the right kidney. The lower pole of this kidney remains intact, also the pelvis and ureter. The tumor has a fairly regular contour, is moderately firm, and it was densely adherent to the surrounding tissues. There is much necrosis, and the tumor

tissue has a grayish brown color. The left kidney, as shown here, has a similar tumor at the lower pole. This lies anteriorly to the rest of the kidney, and there is no distortion of the renal pelvis. This kidney and tumor weighed 630 gm.

In the thorax, 3,100 cc. of thick greenish fluid was found on the right side. The right lung was collapsed, and pocketed to the left of the mid-line behind the heart. Both lungs presented scattered small grayish nodules which have proved to be tumor. The heart presented nothing very remarkable except for two small grayish nodules in the wall of the right ventricle. These project slightly into the ventricular cavity. These also have proven to be tumor deposits. The diaphragm on the right side was extensively invaded by tumor, and presented a thick nodular appearance.

In the cranium no tumor, abscesses, or hemorrhage were found.

Microscopic Examination: These sections are from the primary tumors of the kidneys, and from the metastases of the liver, lungs, and heart wall. A few tumor cells are grouped in a manner suggesting tubules, and some even appear to present glomerular structures. Other areas show more diffuse oval to spindle shaped cells, some of which are fibrillar. These are features of an embryonic mixed growth, and justify the diagnosis of a Wilms' Tumor. There is nothing suggestive of a hypernephroma. The metastases reproduce the same features of histological growth.

DISCUSSION

We have seen here a bilateral Wilms' Tumor in an adult. As you know, this type of neoplasm represents a growth of persistent primitive embryonal kidney structure. It presents a basic structure of mescenchymatous tissue, in which there are gland structures similating tubules, sometimes glomeruli. They are seen most frequently in the first three years of life. I have been able to find only 26 cases reported in adults up to 1939, and this review of the literature shows a marked predominance of unilateral growths.

These tumors grow rapidly, and become very large. Pain and hematuria are usually late. Metastases are most common in the liver and lymphatics. Long surgical survivals are few, local recurrence and metastases being the rule. A few apparently complete recoveries are recorded. Radiation causes regression, but it is doubtful if it will sterilize the growth. Secondary degeneration such as we have in this case is quite common. I regard this as an unusual case, although too far advanced when discovered for any adequate therapeutic measures.

CASE 2 — MALIGNANT CYSTADENOMA OF PANCREAS

Dr. C. A. Cibelius: This patient, age 54, female, was first seen January 14th, 1942. She had been under the care of another physician two months previous, at which time a paracentesis was performed because of abdominal distention. Two quarts of fluid had been removed, and found to be negative for tuberculosis and carcinoma. Since that time the abdominal distention had been increasing. There was no bowel disturbance and no difficulty with urination. Menopause occurred at age of 49, no bleeding since.

Physical Examination: Head, chest, and extremities negative. Abdomen distended; dullness in both flanks; palpable mass in upper left quadrant. Rectal-vaginal examination revealed a firm fixed pelvic floor, and inability to palpate pelvic organs.

Laboratory Examination: Blood: R.B.C. 4,190,000; Hg. 14.2 gm.; W.B.C. 6,400; Stab. 8; Seg. 60; Lymph. 30; Mono. 2.

Urine: Albumin — 1 plus; Acetone — 1 plus; Few pus and R.B.C.'s.

Provisional Diagnosis: Ascites due to:

a). Banti's disease with cirrhosis of the liver.

b). Carcinoma of peritoneum from some primary source in abdomen.

Surgical Exploration: The parietal and visceral peritoneum throughout was found to be studded by small white nodules (2 to 5 mm.). A large nodule in the splenic region, 10 by 15 by 10 cm., was found. This was considered to be the spleen. Two nodular masses were felt on the dome of the liver. These were considered to be metastatic tumor growths. The pelvic organs were not large, but well fixed and firm. 2,000 cc. of fluid was removed, which, on examaination, showed protein 1.8%, specific gravity 1.025, sterile culture, negative tuberculosis. A biopsy was obtained from the peritoneum; sections of this will be projected. This shows scattered groups of epithelial cells with a tendency toward glandular arrangement, and

evidence of some secretory activity. From this finding, a diagnosis of carcinomatosis of the peritoneum, probably secondary to a tumor of the gastro-intestinal tract or ovaries, was proposed.

This patient expired February 27th, 1942, about six weeks after admission to the hospital. At this time symptoms of bowel obstruction had developed.

Autopsy: (Dr. A. R. K. Matthews) In this case the interesting pathology is entirely con fined to the abdominal cavity, with the exception that the upper lobe of the right lung shows a well marked pneumonia. In the abdomen, 2,300 cc. straw colored fluid was found. The greater part of the ileum was distended to a point in the terminal portion where a partial obstruction was found due to inclusion in an adherent mass which consisted of the uterus, ovaries, and bladder. The peritoneum had a dull reddish gray appearance, and showed many adhesions. The liver weighed 1,320 gm., and presented two small grayish nodules on the dome, each measuring 2 cm. in diameter. In the region of the pancreas, a large mass, 12 by 10 by 7 cm., was found. This mass had a cystic character. It was attached to the spleen, though quite distinct from that organ. I have it here, and, as you see, it replaces almost the entire pancreas, only a small portion of which remains at the head. The cyst cavities are multiple, and communicate. They contain thick dark yellowish material. The walls are irregular, and have a light grayish gelatinous-like structure. On investigation, both ovaries were found to present cystic tumors, similar in every respect to the tumor of the pancreas. In these you will see and note the similarity of apperance. The ovaries are not markedly enlarged, each being about 5 cm. in diameter.

The stomach did not contribute to the pathology. The kidneys, ureters, adrenal glands, and uterus also did not contribute.

Microscopic Examination: The sections which you see present a definite papillary cystadenoma with marked secretory activity. The secretion is of a gelatinous type. The epithelial calls are tall, and quite uniform, but there is evidence of malignant infiltration. The tumor growth is identical in the ovaries in every respect.

DISCUSSION

This is an interesting case which is also unusual. Cystadenomas of the pancreas are not common. The malignant degeneration with extension to the peritoneum and ovaries is a further interesting feature resembling the Krukenberg tumors which occur secondary to tumor growths of the stomach. While we originally felt that the primary growth in this case might be the ovaries, I feel now that the pancreas is the source of the malignancy.

Question: (Dr. D. H. Wrórk) Is there a definite pathological picture for Banti's disease?

Yes, one is recognized and described as regards the spleen. It consists chiefly of a diffuse fibrosis and hypertrophy. Cirrhosis of the liver is supposed to develop subsequently. However, in my experience, Banti's disease, as originally described, is very infrequent; and I believe when these cases are thoroughly sifted out, that the diagnosis will be seldom made.

MINUTE SULFATHIAZOLE CRYSTALS

Minute crystals (microcrystals) of sulathiazole, a derivative of sulfanilamide, prepared by a new procedure, have been found to be more effective aids in treatment of surgical wounds and local infections than the ordinary large sized crystals of the drug, Leslie A. Chambers, Ph. D.; T. N. Harris, M.D.; Francis Schumann, M.D., and L. Kraeer Ferguson, M.D., Philadelphia, report in the May 23 issue of *The Journal of the American Medical Association.*

In certain procedures it is desirable to inject the sulfonamides through fine hypodermic needles, they explain. Usually this is not possible because of the large size and irregular shapes of the crystals. It was found that direct vibration did not reduce the size of the crystals. However, an indirect procedure involving sonic agitation has been developed which reduces the crystal size sufficiently to permit passage through 26 gage needles. By sonic agitation is meant vibration by means of high frequency audible sound waves.

The author says: "The results with the local use of the microsulfathiazole in thirty traumatic wounds and 57 cases of infection have been favorable. It was used in suspension in the abdomens of 19 patients with no untoward results. . . ."

★ BUY WAR BONDS ★

News of the State

PERSONALS · COMING EVENTS · MARRIAGES · DEATHS

A grant-in-aid for a study in research of Rheumatic Fever has been awarded to Dr. Rowine M. Hayes by the Trustees of the Chicago Heart Association Memorial Fund founded in memory of Morris Fishbein, Jr.

This memorial fund was established for the purpose of a study in research in some phase of cardiovascular disease.

Dr. Hayes will do her work at the Children's Memorial Hospital, Chicago, under the direction of Dr. Stanley Gibson.

At the annual meeting of the Illinois Psychiatric Society held on May 9, the following officers were elected for the year 1942-43: President, Francis J. Gerty; Vice-President, Franz Alexander; Secretary-Treasurer, Eugene I. Falstein; Councilor, David B. Rotman; Councilor, Hugh T. Carmichael.

The Chicago Society of Allergy at its last meeting elected the following officers for the coming year: President, Michael Zeller; President-Elect, L. E. Markin; Secretary-Treasurer, Helen C. Hayden.

The doctors of Jersey-Greene County Medical Societies met in Carrollton on May 8th at which time Groves B. Smith, Superintendent of Beverly Farm spoke on "Neurology." His lecture dealt with the neurological conditions most frequently met by the general practitioner.

DEATHS

Edward H. Wolinski, Chicago; Loyola University School of Medicine, 1919. Died of a heart ailment on April 23, 1942, at the age of 48 years.

A. Lee Alderson, Pana; Chicago Medical College, 1913. Died April 27, 1942 as the result of an automobile accident at the age of 54.

Alfred Buck, Palatine; Jenner Medical College, 1914. Died April 29, 1942, following a heart attack.

Walter Burgess, Pana; Marion Simms College of Medicine, 1927. Died suddenly April 26, 1942, at the age of 66.

Emery M. Byers, Genoa; University of Illinois College of Medicine, 1898. Died May 23, 1942 at the age of 69 years.

John DeWitt Byrne, DuQuoin; Kentucky School of Medicine, 1904; member of the American Board of Ophthalmology; member of the faculty at Tulane University. Died April 12, 1942, at the age of 62.

Charles Perry Clarke, Rochelle; Chicago Homeopathic Medical College, 1897. Was a member of the Rochelle American Legion Post and had practiced medicine in Rochelle for 18 years. Died suddenly May 7, 1942 at the age of 70 years.

Clarence Edward Quaife, Galesburg; Louisville and Hospital Medical College, 1908. Practiced medicine in Galesburg about 34 years; member of the Illinois State Medical Society. Died May 2, 1942, at the age of 66.

Charles Sylvester Skaggs, East St. Louis, Barnes Medical College, St. Louis, 1903. Past president of the Illinois State Medical Society and charter member and past president of the East St. Louis Kiwanis Club. Had practiced medicine in East St. Louis for 38 years. Died May 6, 1942 at the age of 63 years.

Orval Addison Suttle, Mt. Vernon; Barnes Medical College, St. Louis, 1909; member of the Illinois State Medical Society. Had practiced medicine in Mt. Vernon for 30 years. Died May 6, 1942 at the age of 70 years.

Frank Breckenridge Earle, La Grange, Ill.; College of Physicians and Surgeons of Chicago, 1885; member of the Illinois State Medical Society; joined

the staff of his alma mater in 1885 with the title curator of museums, in 1888 became lecturer on practice of medicine, in 1889 assistant to the chair of practice, in 1894 lecturer on obstetrics, from 1895 to 1902 professor of obstetrics, from 1901 to 1913 secretary of the college, and from 1903 until September 1914 professor of pediatrics, when he was made professor emeritus; served during World War I; aged 81; died, March 6, in Eustis, Fla., of arteriosclerosis and bilateral pyonephrosis.

MARK ALLEN GIER, Elgin, Ill.; Jenner Medical College, Chicago, 1909; served during World War I; formerly on the staff of St. Elizabeth Hospital, Chicago; aged 65; died, March 2.

JEROME HARVEY HUNTER, Chicago; Meharry Medical College, Nashville, Tenn., 1921; aged 53; died, March 21, of pneumococcic meningitis.

HENRY GEORGE LAMPE, Chicago; College of Physicians and Surgeons, School of Medicine of the University of Illinois, 1901; was associated with the Veterans Administration, Hines, Ill., from July 1923 to March 1928; formerly local surgeon, health officer and assistant surgeon, Illinois Central System; served during World War I; aged 62; on the staff of the Illinois Central Hospital, where he died, March 5, of coronary thrombosis and hypertensive heart disease.

AXEL THORSTEN LARSON, Chicago; Northwestern University Medical School, Chicago, 1925; member of the Illinois State Medical Society; aged 58; died, March 14, in Tucson, Ariz., of rheumatic heart disease.

HARRY RANDOLPH SPICKERMON, North Henderson, Ill.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1898; aged 68; died in March at St. Mary's Hospital, Galesburg, of pneumonia and emphysema.

DOGS AND TULAREMIA

Evidence that dogs may be susceptible to infection with tularemia (rabbit fever) is presented in *The Journal of the American Medical Association* by L. F. Ey and R. E. Daniels, Columbus, Ohio, who report an instance in which they found the disease occurring in 3 dogs and their master. The dogs recovered, whereas, the owner died. Heretofore it had been considered by many that dogs possessed a natural immunity to the disease.

The owner of the 3 dogs went hunting with them on Nov. 6, 1940. The dogs ran down a rabbit which they killed and the master divided it into three pieces, giving one to each dog. The following day the youngest dog became ill and the other 2 dogs became ill a day or two later. On November 9 the owner of the dogs became quite ill with chills and fever and on November 11 he was hospitalized. Although he received antitularense serum treatment the owner of the animals died on November 16. Blood specimens from each of the 3 dogs were positive for the tularemia organism.

REPORT ILLUSTRATES HAZARDS INVOLVED IN SELF MEDICATION

Physicians Tell Of Two Patients Who Showed Evidence Of Poisoning From Massive Doses Of A Substance With Vitamin D Activity

The hazards of self medication with massive doses of vitamin D, particularly in the summer time, are illustrated in a report in *The Journal of the American Medical Association* for May 16 by Philip A. Tumulty, M.D., and John Eager Howard, M.D., Baltimore, of 2 patients who showed evidence of poisoning from massive doses of irradiated ergosterol, a substance which acquires the properties of vitamin D_2 when subjected to ultraviolet rays. This bears no relationship to the taking of vitamin D by infants for the prevention of rickets.

"During the past five years," the two physicians say, "there have been an increasing number of clinical reports regarding the use of massive doses of vitamin D in the treatment of rickets, tetany, rheumatoid arthritis and various allergic states.

"We shall make no attempt to evaluate the therapeutic (treatment) efficacy of vitamin D or its concentrates in these conditions but shall rather put out a suggestion of caution regarding the possible ill effects that may follow, under certain circumstances at least, the employment of massive doses of the vitamin. . . ."

They tell of 2 young men who, in July 1941, were given massive doses of irradiated ergosterol, presumably as an aid in the reuniting of fractured bones of the leg. About two weeks after the massive doses were started nausea, followed by abdominal pain and vomiting, developed. It was found that hypercalcemia (excessive amounts of calcium in the blood stream) and a persistent impairment of the function of the kidneys had developed. The diagnosis was irradiated ergosterol intoxication and within two days after fluids had been forced and the patients given a low calcium diet, the symptoms disappeared.

Of particular significance is the observation of the two physicians that "The circumstances which may have contributed to this intoxication were the amount of drug which was given, the vehicle in which the drug was given (milk), the calcium content of the diet, the factor of immobilization and the season of the year."

They point out that there are great individual variations in the dose required to produce poisoning; that a seasonal variation with reactions much more frequent in the summer time is well established, and that diet also is an important factor.

Case finding in tuberculosis is a costly procedure but when measured against the estimated monetary losses caused by the disease, the expenditure for the discovery of cases seems relatively small. H. R. Edwards, M.D., et al, Milbank Memorial Fund Quarterly, Oct. 1941.